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Shaping The Seventies

UNIVERSITY OF
MASSACHUSETTS BULLETIN
REPORT OF THE PRESIDENT
1970-1971

VOLUME LXIII Number 11
December 1971

Published eleven times a year by the University of Massachusetts in February, March (3), June, August (2), September, November, and December (2). Second Class postage paid at Amherst, Massachusetts 01002 and at additional mailing offices.

The cover design is a new graphic symbol for the University, to be used in some form on all official publications. It was designed by Roger Roche of the Publications Office at Amherst.

Shaping The Seventies

The Board of Trustees

Organization of 1971	*Term expires*
Joseph P. Healey *of Arlington*	1977
Frank L. Boyden *of Deerfield*	1974
Robert M. Abrams *of Holyoke*	1977
Kevin R. Carman '72 *of Cambridge*	1972
Edmund J. Croce *of Worcester*	1977
Dennis M. Crowley *of West Roxbury*	1973
Robert D. Gordon *of Lincoln*	1978
John W. Haigis, Jr. *of Greenfield*	1975
Mrs. Eliot S. Knowles *of South Dartmouth*	1975
Lorenzo D. Lambson *of Southwick*	1973
John J. Maginnis *of Worcester*	1972
George L. Pumphret *of Dorchester*	1974
Mrs. George R. Rowland *of Osterville*	1972
Lee Sandwen '72 *of Annandale, Virginia*	1972
Alan Shaler *of Easthampton*	1977
Mrs. O. Phillip Snowden *of Roxbury*	1976
Frederick S. Troy *of Boston*	1977
Christopher J. Weldon *of Springfield*	1976

Ex Officio

Francis W. Sargent *of Dover, Governor of the Commonwealth*
Robert Wood *of Lincoln, President of the University*
Nathan Chandler *of Sterling Junction, Commissioner of Agriculture*
Alfred L. Frechette, M.D. *of Brookline, Commissioner of Public Health*
Milton Greenblatt, M.D. *of Newton, Commissioner of Mental Health*
Neil V. Sullivan *of Cambridge, Commissioner of Education*
Merle L. Howes *of Amherst, Chairman, Board of Selectmen*

Officers of the Board

Joseph P. Healey *of Arlington, Chairman*
Frank L. Boyden *of Deerfield, Honorary Chairman*
Robert J. McCartney *of Amherst, Secretary*
Kenneth W. Johnson *of Amherst, Treasurer*

The President

Robert Wood took office July 1, 1970, as the 16th President of the University of Massachusetts, and the first president of the new multi-campus University. He was formally installed on December 9, 1970, in ceremonies that began in Boston and included programs on each of the three major campuses. The italicized quotations within this report are from his installation address.

At the time of his appointment as President, Dr. Wood was head of the department of political science at M.I.T., Director of the Joint Center for Urban Studies, and Chairman of the Board of the Massachusetts Bay Transportation Authority.

A graduate of Princeton University, Dr. Wood holds an M.A., M.P.A., and Ph.D. from Harvard. He is a member of the American Academy of Arts and Sciences, the American Society for Public Administration, the American Political Science Association and Phi Beta Kappa. During the past year he has served as Chairman of the Urban Problems Committee of the National Association of State Universities and Land Grant Colleges, and he is president of the Yankee Conference for 1971-72.

The Annual Report

The year 1970-71 brought more than a change of leadership to the University of Massachusetts; it marked the formal transition of the University from a single geographic center—located at the site originally chosen in 1863—to a statewide institution with three major campuses and six "outposts" of education and service. The year was further noteworthy for a ten percent growth in enrollment, unprecedented capital construction, strengthened administration at the campus level, continuing educational innovation, and a widespread re-examination of University policies and goals. With the events and initiatives of this year, the University clearly has turned the corner of a new decade.

Building on the vision and momentum of the 1960s, we have the opportunity to fashion a great public university of a different character and mold than now exists in the United States.

The first priority this year has been to build the framework of a statewide university and a sense of common purpose and partnership. To these ends I can report the following developments:

1. A University office separate from the campuses was established in Boston at 85 Devonshire Street.

2. University-wide coordination in the areas of budget, personnel, public affairs, and community and alumni relations was initiated with the appointment of the University's first two vice presidents: Franklyn W. Phillips, former Regional Administrator of the National Aeronautics and Space Administration, as Vice President for Administration; and L. Edward Lashman, Jr., General Manager of the Urban Housing Associates of Denver, Colorado, as Vice President for Development.

3. Two University-wide institutes were established. The Institute of Governmental Services, under former Senate President Maurice Donahue, will help to make University resources available to the administrators and selectmen of the state's 351 cities and towns. The Institute for Labor Relations, led by Joseph Cass who also serves as Executive Assistant to the President, conducts seminars and courses for union members. It is undertaking a major new program in advanced labor executive training.

4. A President's Council, which includes the

Chancellors of Amherst and Boston and the Dean of the Medical School, now meets monthly for policy discussions prior to the Board of Trustees meetings. I have undertaken a series of personal consultations with the faculties, students and governing bodies on each of the campuses, and two student internes—one chosen from Amherst and one from Boston—are working in the University office.

5. Dr. Franklin Patterson, Board Chairman and former President of Hampshire College, has been appointed Frank L. Boyden Professor—the first University-wide professorship. He is working in the area of cooperation among public and private institutions under the partial sponsorship of The Ford Foundation.

6. The Board of Trustees delegated substantial authority over personnel and academic programs on the campuses to the Chancellors. Responsibility for major administrative and academic appointments and University-wide programs was delegated to the President's Office.

A second priority concern this year has been strengthening relationships between the public and private sectors in higher education. While this is an area in which much remains to be done, I can report encouraging progress. The Five College Program brings together Amherst, Hampshire, Mount Holyoke, Smith, and the University of Massachusetts in the western part of the State. This well-established cooperative arrangement has been strengthened over the past year by frequent meetings of the five presidents, agreement on some common institutional planning, and a 50 percent increase in the student interchange among campuses.

The Worcester Consortium of 20 institutions is a second cooperative effort designed to broaden educational offerings, create new economies, and to facilitate community service and continuing education. President George Hazzard of Worcester Polytechnic Institute is leading that enterprise, and the University of Massachusetts Medical School is pledged to cooperate.

In Boston, discussions have been underway for nearly a year among the presidents of the eight large graduate universities inside Route 128—Boston College, Boston University, Brandeis, Harvard, M.I.T., Northeastern, Tufts, and the University of Massachusetts. This group, tentatively dubbed the Boston Eight, may in turn develop into a cooperative arrangement of its own. I certainly hope so.

At the University level, our third major priority in 1970-71 has been to identify the issues that will confront the University in this decade and the possible new directions and responses that will be required. In December, 1970, I appointed a twenty-one-member Committee on the Future University of Massachusetts under the chairmanship of Dr. Vernon Alden, Chairman of the Board of The Boston Company and former President of Ohio University. I asked this Committee—which has representation from alumni, the campuses, the public, and the academic and business communities—to consider several broad questions:

—What principal forces in terms of population pressures, economic growth, technical changes, and manpower requirements

will be placed upon the University and what responsibilities will it consequently be asked to assume?

—What changes can and should we anticipate in the University as a community in its style of life and in the working relationships among faculty, students, administration, and alumni?

—What changes are necessary and desirable in the content of what the University learns through research and teaches through instruction; and how do we balance the reliable acquisition of knowledge with its humane use?

—How should the total educational response of the state be shared among public and private institutions and how can these diverse institutions at all levels of higher education better learn to work together for common purposes?

—How do we continue to educate beyond the accustomed years of early adult life and what arrangements do we make to encourage men and women to learn and to grow throughout their lives?

—How can the University better serve the state in making its resources available to respond to our collective public needs?

The Committee met intensively throughout the spring and summer. Peter Edelman directed a small staff in assembling information and conducting extensive interviews among students, faculty, and administrators on the campuses. The Committee's report was made available in December, 1971, and will have a very significant impact on the ways in which we move forward.

I appointed two study groups—one on a University Code and one on Faculty Rights and Responsibilities—that met in the summer of 1971. Their reports are being reviewed by both the campus senates and the Board of Trustees.

In June, 1971, I asked Attorney General Robert Quinn to convene a committee to study whether the University should develop a law school, and, if so, where it should be located. Their recommendations will assist the Board of Trustees in this key area of academic planning.

These initiatives and the several campus planning and study groups reported below are part of an important process of re-examination and renewal. This process has become both necessary and urgent if we are to respond to the challenge of the 1970s.

Enrollment

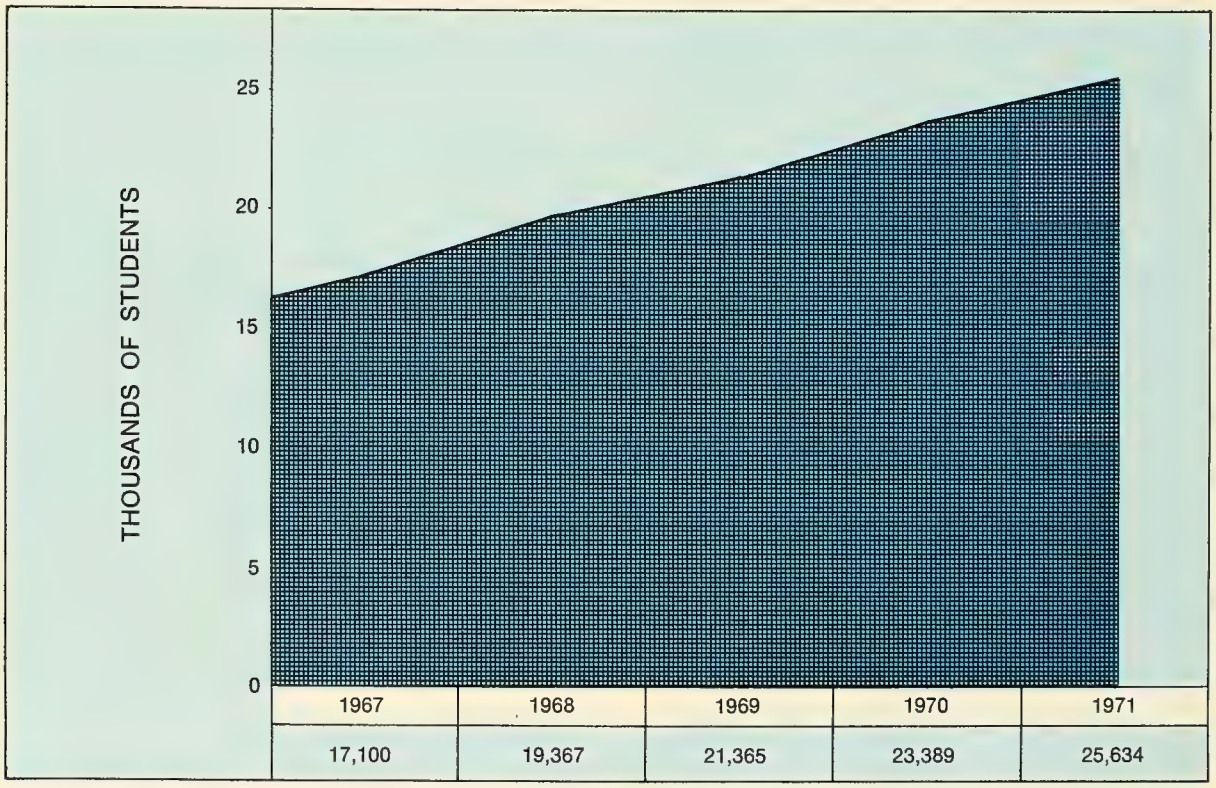
The total enrollment in September, 1971, of 25,634 was an increase of 9.6 percent over September, 1970. The breakdown by campus was as follows:

	1970	1971
Amherst		
Undergraduate	15,262	16,212
Graduate	3,236	4,079
Stockbridge School	620	618
Total	19,118	20,909
Boston	4,255	4,685
Worcester	16	40

Ninety-five percent of the undergraduate enrollment and 56 percent of the graduate enrollment came from Massachusetts. Ninety-five percent of the students at Boston came from within a ten-mile radius of the campus—roughly within Route 128.

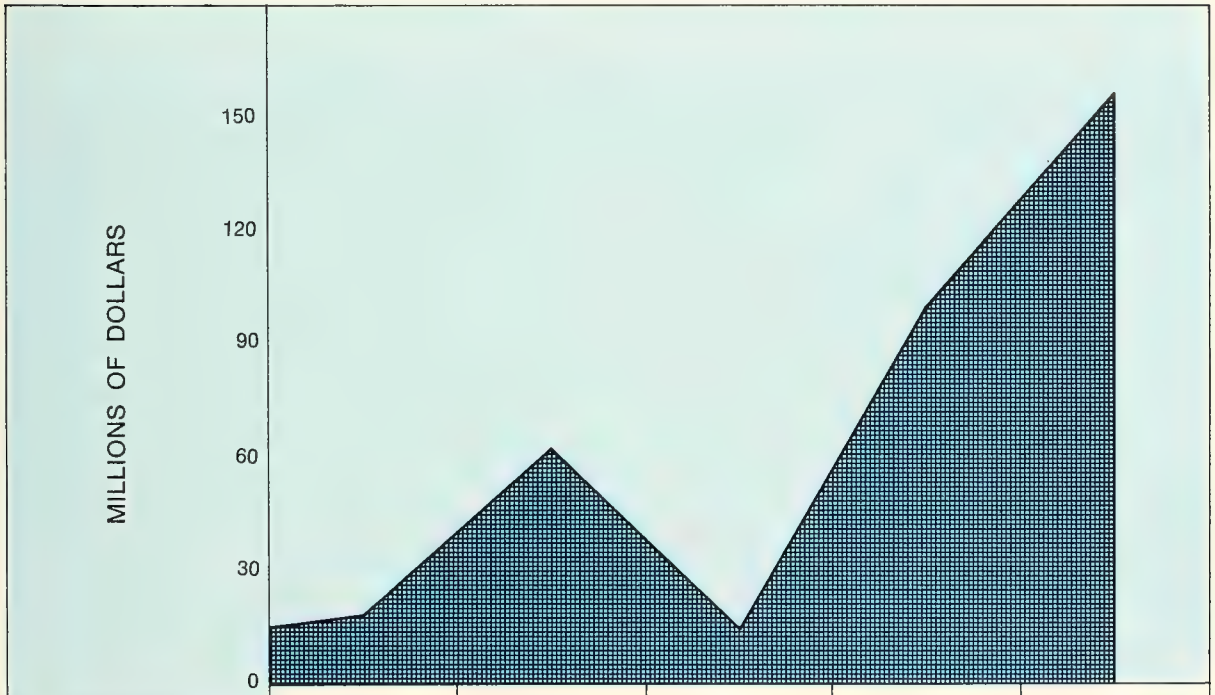
University of Massachusetts
Fall Enrollments, 1967-1971

(All Campuses — Full-Time Equivalent)



University of Massachusetts
Capital Outlay, 1967-1971

(All Campuses — Not Including Funds of Massachusetts Building Authority)



FISCAL	1967	1968	1969	1970	1971
TOTAL	$18,007,000	$62,332,000	$13,997,000	$99,776,000	$156,340,000

"The knowledge and skills that exist in this University are among the state's great natural resources. They represent opportunities to bring about not only incremental improvements in the environment but institutional change."

THE NEW MARINE STATION, HODGKINS COVE, GLOUCESTER

New Facilities

With the start of construction at Columbia Point, full-scale activity on the medical center at Worcester, and continued major work at Amherst, 1970-71 was a time of unprecedented physical development for the University.

Six buildings are underway at the future Boston campus: two "colleges" (including classroom, office, and recreation facilities), the first half of a science center, a library, an administration building, and a service building. These facilities, representing a capital outlay of $130 million, are scheduled for occupancy in September, 1972.

Construction crews of up to 500 men are at work on the Medical Science building and power plant at the Worcester campus. The building will be completed by September, 1974, in time for the first full-scale entering class of 100 medical students. Meanwhile, planning is underway for a 400-bed teaching hospital which will be connected to the medical building.

The Murray D. Lincoln Campus Center at Amherst, under construction for three years, was opened for full occupancy in September, 1970. The Center, financed by student fees and conference charges, includes student offices, lounges, and meeting rooms, 200 overnight accommodations, an auditorium, restaurants, and a 900-car parking garage.

The first of three new eight-story residence halls and the first of 240 modular units of married student housing also opened at Amherst during the year. The residence halls, which are designed for 1,400 students in suites of six to eight students each, are named for former members of the Board of Trustees: Harry Dunlap Brown, William M. Cashin, and Elizabeth L. McNamara.

Construction continued at Amherst on the spectacular 28-story University Library, the Graduate Research Center, and Tobin Hall, a classroom and office facility for the College of Arts and Sciences. Construction began at the southern end of the Amherst Campus Pond on the new Fine Arts Center, which will have a total of 215,000 square feet of studios, classrooms, auditoriums, and theaters.

On May 19, I formally dedicated the newest University research and teaching facility: the Marine Station at Hodgkins Cove in Gloucester. The station includes 10 acres of waterfront, a stone pier, and a newly remodelled laboratory-office building. A 42-foot diesel-powered research ship has been purchased with funds raised by the Cape Ann Society of Gloucester.

New Directions in Education: Amherst

During 1970-71, the University of Massachusetts at Amherst initiated:

—new undergraduate majors in human development, Soviet and Eastern European studies, comparative literature, and computer systems engineering;

—summer internships in Washington, D.C., under the Department of Government;

—a Bachelor's Degree with Individual Concentration for students who wish to work out individual programs of study under faculty sponsorship;

—a Department of Afro-American Studies in collaboration with the Five College program;

—an interdisciplinary Institute for Man and His Environment;

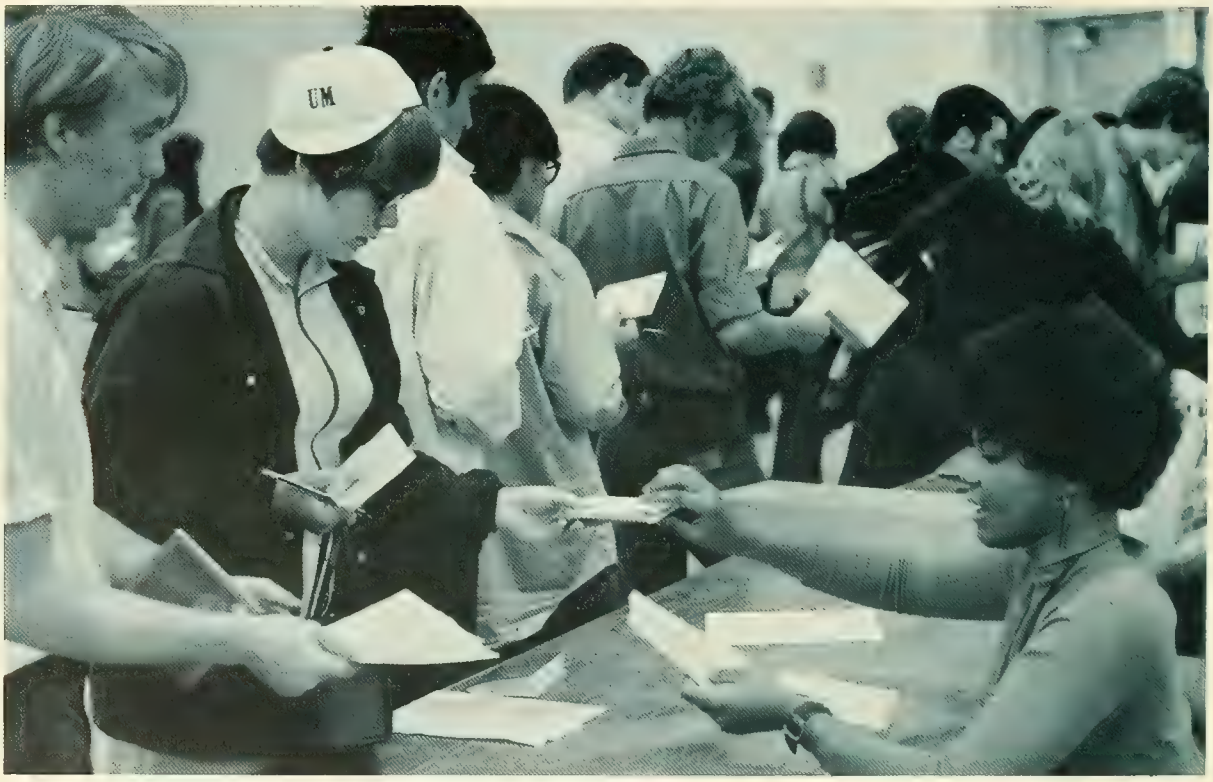
—a Master's Degree in Public Administration and doctoral programs in speech and in human movement.

University faculty taught 61 courses in Amherst, Greenfield, Holyoke, Pittsfield, and Springfield under the new Division of Continuing Education.

Core curriculum requirements were reduced, and a deferred admissions option was begun. Summer Session was extended from six to eight weeks, making it possible to take three rather than two courses.

The office of campus ombudsman was created to help settle grievances of students, faculty, or

REGISTRATION BECOMES MORE COMPLEX AS ENROLLMENT INCREASES.



staff members. Dr. Ellsworth Barnard, Professor of English, was appointed as the first ombudsman.

The University of Massachusetts at Amherst and the University of Connecticut agreed to staff jointly a four-year training program for government administrators at the University of Ife, Ibadan, Nigeria. Student exchange programs were approved with the University of Birmingham, and the University of Keele, in England. The year-long Germanic Studies program at the University of Freiburg and our overseas summer programs in Bologna, Italy; Freiburg, Germany; Madrid, Spain; Oxford, England; Pau, France, and St. Vincent in the Caribbean were continued and improved.

The School of Education received a Carnegie grant to prepare the transition to a curriculum based entirely on "modules" of varying length rather than on traditional "courses." The school also has a contract with the Office of Education to analyze national data on compensatory education at the elementary level.

The coeducational dormitory program, started with one small dormitory in 1969, was expanded to nine residence halls by the vote of the residents and with the support of the Board of Trustees. An experiment in residential living based on areas of interest began in the spring when four suites in the new Cashin Residence Hall were set aside for freshman engineering students.

Through the Agricultural Experiment Station, the University became a charter member of an eight-university Consortium for Environmental Forestry Studies. The Station has contracted with the U.S. Forestry Service to establish at Amherst a center for research and forestry in urban areas. The Department of Hotel, Restaurant and Travel Administration in the College of Agriculture has a grant from the Statler Foundation to conduct a summer course aimed at upgrading minority group hotel employees to supervisory and managerial jobs.

There was a substantial increase in direct individual counselling services to students, with emphasis on training graduate students to handle substantial case loads. The Room to Move drug information and counselling center operated by students received a $37,000 grant from the Department of Health, Education and Welfare to continue its work for a second year.

The School of Business Administration's planning and development task force reported on a two-year study, and self-study committees are underway in both the School of Home Economics and the School of Nursing.

The number of advanced degrees granted in 1970-71 exceeded 1,000 for the first time. Masters degrees increased from 708 to 773, while doctorates—including those under Five College cooperation—increased from 154 to 264. The 1969 survey of doctoral programs by the American Council on Education listed the University's botany and German programs among the top 20 nationally in those fields. Five programs—chemistry, microbiology, physiology, psychology and sociology—were rated superior. The graduate dean's office—at my request and that of the Chancellor—has begun a review of all existing graduate degree programs, using the same expanded assessment methods now required for new programs.

"I am persuaded that the real hope for change lies in an institutional approach. The University as an institution that represents both knowledge and change can work with other institutions that need knowledge and are receptive to change. This process—properly undertaken—can feed back to and strengthen the University's own educational and research capacities."

New Directions in Education: Boston

The Institute for Learning and Teaching received a grant from The Ford Foundation to begin operations in September, 1970. The result of planning by a group of faculty members and a representative from the Boston School Department, the Institute is providing direct training services and support to teachers facing specific problems.

The Boston campus approved a new constitution in the fall of 1970 which established a single University Senate with a 40 percent student membership to replace the separate faculty and student senates. The Senate will be the official governing body of the campus until the spring of 1972 when the campus divides into two "colleges."

Chancellor Broderick and the University Senate are already engaged in planning for an experimental third college. In a departure from the liberal arts pattern of the first two colleges, College III will emphasize education for public and community service.

A full-time community relations officer for the University, Berton Fliegel, set up an office in October at Columbia Point. The University's construction manager and the Columbia Point Action Coalition worked closely on recruiting employees from the housing project for the contractors building the new campus there. Professor Harry Brill of the sociology department headed a student-faculty task force to plan joint programs with a committee of Columbia Point residents. One result has been a tutorial program for Columbia Point youth.

A major in music and a special junior year in Paris program were approved during the year, and new appointments brought the total number of faculty members to 315, up from 256 the previous year.

New Directions in Education: Worcester

During this report year, the Medical School accepted its first class, received accreditation for two years from the American Medical Association and the American Association of Medical Colleges, and completed affiliation agreements with two Worcester hospitals.

A number of innovations in medical education are already underway, including:

—consideration of pass-fail grading;

—incorporation of pharmacology with other subject fields rather than as a separate department;

—a special education program in community health;

—academic collaboration with the University Health Services at Amherst, which will encompass a two-week field experience for medical students on that campus.

Community Service

As a land-grant university, the University of Massachusetts has a long tradition of service to the state's industry and farmers. Increasingly in recent years, community service has come to encompass a great variety of activities. The Institute of Governmental Affairs and the Institute for Labor Relations are efforts to focus and enlarge our service activities in those areas.

Here are just a few examples of community service in 1970-71:

The School of Home Economics at Amherst has 275 program assistants in Food and Nutrition doing work with disadvantaged families in 21 localities.

A Women's Advisory Center was opened at the Amherst campus under sponsorship of the Division of Continuing Education and Valley Women's Center in Northampton.

A SPANISH-SPEAKING UNIVERSITY STUDENT DIRECTS SCHOOL RECREATION AT SPRINGFIELD UNDER THE ACTION PROGRAM.

The first Community Service Award of the Corporation for Public Broadcasting was presented to the University's FM radio station WFCR for its daily Spanish-language program, "Que Tal, Amigos," designed to assist newly arrived Latin-American families to adapt to living conditions in the industrialized Northeastern United States.

The University at Worcester opened its library —the only major medical library in the Commonwealth outside Boston—to all physicians, nurses, and other medical personnel in the area.

The Boston campus is training library aides in Roxbury and East Boston under a special contract with the Boston School Committee.

A mathematics curriculum was prepared at Boston for the Model Cities Higher Education Facility.

The list could go on and on. . . .

A UNIVERSITY STUDENT AND A COMMUNITY WORKER JOIN IN ONE OF MANY URBAN SELF-HELP PROJECTS.

THE MEDICAL SCHOOL CAMPUS, WORCESTER

"I am concerned about the absorbtion as well as the production of knowledge. In field after field, the knowledge we have has outrun our ability to use it and our willingness to pay what it costs."

Board of Trustees

The Board of Trustees have played a leading role in the evolution and strengthening of the new multi-campus University. Having laid out the design of the system, the Board has moved to redefine its own role more in terms of broad policy formation and less in the specifics of operation. The delegation of authority on many personnel actions was part of this process.

During this year, the Trustee Committee on Faculty and Educational Policies studied admissions policies, the pass-fail system, attrition rates, faculty teaching loads, and programs for disadvantaged students at both Amherst and Boston.

The Student Activities Committee continued its concern with advising and counselling services and with living conditions on the Amherst campus. Open house rules, decoration of residence hall rooms and security precautions were discussed. The increased need for security, resulting from rapid growth, was met through a deficiency budget request.

The Board authorized development of academic and social programs in the residence halls and encouraged wide student participation in dormitory governance and the development of residence hall budgets. Guidelines were established for coeducational living, including volunteer participation and parental permission for students under 21 years of age.

Three trustees left the Board during the year and two new members were welcomed. Dr. Louis Lyons retired February 22 after seven years of service. Selectman Norman MacLeod of Amherst was succeeded by Selectman Merle L. Howes, and Student Trustee Glenn Elters from the Amherst campus was succeeded by Kevin Carman from the Boston campus.

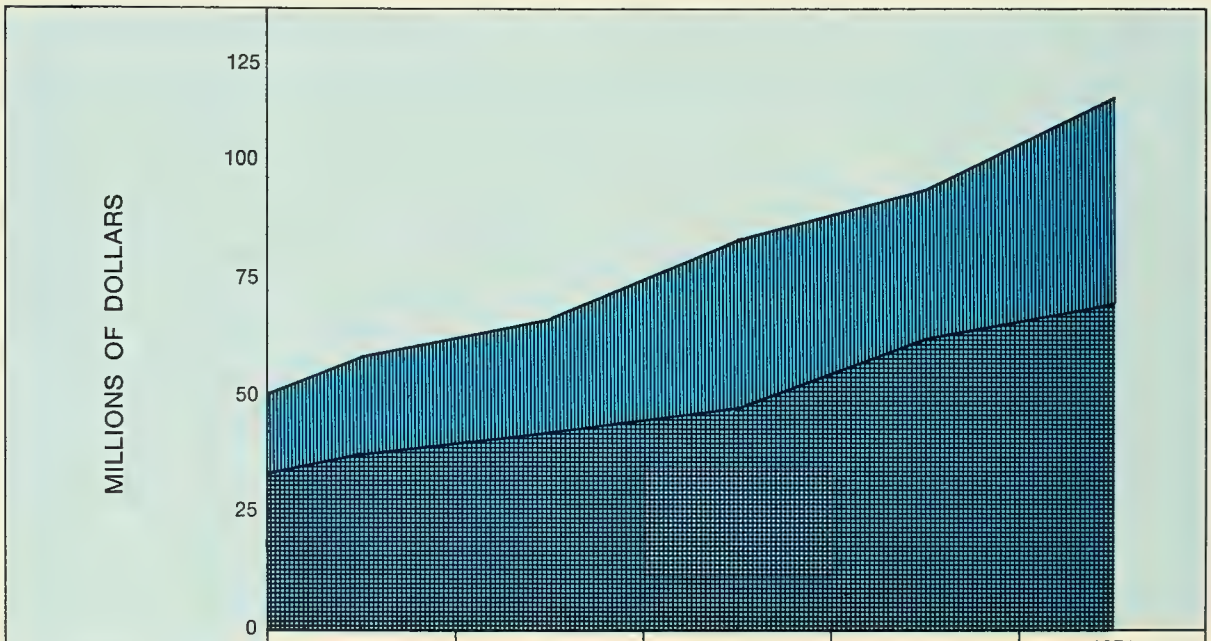
Appointments and Retirements

Chancellor Oswald Tippo reorganized the Amherst campus administration with a number of major appointments. Dr. Robert Gluckstern was named Vice-Chancellor for Academic Affairs and Provost. Dr. Randolph W. Bromery became Vice-Chancellor for Student Affairs, and Thomas B. Campion, former Director of Operations for the *New York Times*, was appointed Vice-Chancellor for Administrative Services. Dr. Robert L. Woodbury of the School of Education and Dr. Robert G. Hoopes, former Dean of Faculty at the Boston campus, were named Associate Provosts.

Assistant Professor John W. Denison succeeded Dean Fred P. Jeffrey as Director of the Stockbridge School of Agriculture. Dean Jeffrey retired in February after 17 years on the faculty. He received a citation from the Trustees in recognition of his dedicated services.

University of Massachusetts
Total Expenditures and Operating Income from the Commonwealth, 1967-1971

(All Campuses)



FISCAL	1967	1968	1969	1970	1971
STATE APPROPRIATIONS FOR OPERATION	$36,921,147.89	$42,000,576.22	$47,050,336.74	$61,186,319.12	$69,364,989.68
TOTAL OPERATING EXPENDITURES	$57,892,774.13	$69,430,242.99	$83,079,071.60	$93,452,995.11	$112,719,900.30

"In this credential society, our universities have become the great certifiers of employability for the young. I believe we owe them the substance as well as the certificate."

THE CLASSROOM—STILL THE CORE OF UNIVERSITY ENDEAVOR.

The College of Arts and Sciences was reorganized into three faculties, each headed by a Dean: the Faculty of Humanities and Fine Arts under Associate Provost Jeremiah Allen; the Faculty of Social and Behavioral Sciences under Dr. Dean Alfange, Associate Professor of Government, and the Faculty of Natural Sciences and Mathematics with Jeremiah Allen as Acting Dean.

Dean Mary A. Maher retired as Dean of the School of Nursing. She was honored at a special Founder's Day program and a $6,000 scholarship fund has been established in her name for nursing students.

Dean Warren P. McGuirk announced his retirement from the School of Physical Education after 22 years of service. Associate Dean David Bischoff was named to succeed him.

Dr. Dayton Carritt, former Chancellor of Nova University, was appointed director of the new Institute for Man and His Environment.

John C. Marchant, Director of Security for six years, retired in March. In July, 1970, he was named President of the National Association of College and University Security Directors.

Vic Fusia, who has been Head Football Coach for a decade, resigned at mid-year.

Other campus appointments included:

—Lillian Goodman Teudesman as Acting Dean of the School of Nursing;

—Dean Robert W. Wagner as Acting Director of the Office of Institutional Studies;

—Dr. Hodges Glenn as Director of the CCEBS special educational opportunities program;

—Dr. Pat W. Camerino as Associate Dean for Research and Chairman of the Research Council in the Graduate School.

New department heads and chairmen were named as follows: Professor George Wardlaw, Art; Professor Harold L. Boudreau, Hispanic Languages and Literatures; Professor James E. Lynch, Speech; Professor Warren D. Anderson, Comparative Literature; Professor R. Clinton Fuller, Biochemistry; Professor Harold L. Rauch, Zoology; Professor Robert H. MacNeal, History.

On the Boston campus, Dr. Dorothy Marshall, former Director of Special Studies at Holy Cross College and former Dean of Bryn Mawr College, was appointed Dean of the Faculty and Provost.

Dr. Daisey Tagliacozzo was selected as Dean of College I, and Dr. Walter Rosen as Dean of College II.

Dr. Gregory Anrig was appointed Dean of the new Institute for Learning and Teaching, and Livaughn Chapman, a member of the first graduating class from the Boston campus, is the new Director of Special Admissions, the program for minority and educationally disadvantaged students.

Several departments named new chairmen during the year: Professor George Koniaris, Classics; Professor Jean Collignon, French; Professor Lynn F. Dhority, German; Professor James E. Blackwell, Sociology-Anthropology; Professor Donald Lyons, Physics; Professor David Podoff, Economics (Acting); Professor George Siegel, Russian; and Professor Bates Lowry, Art.

Budget

The University of Massachusetts has enjoyed sustained support from the legislature during a period of considerable growth in both the quantity and quality of its programs. Over a

"Most of the changes that have resulted from the turmoil and agitation of the past few years are largely marginal and incremental. I think the time has come to undertake more systemic changes."

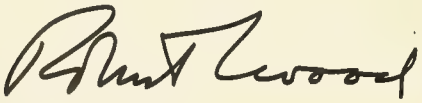
DR. RICHARD SAUNDERS, UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL, AND LAWRENCE E. FOX (RIGHT), EXECUTIVE DIRECTOR, WORCESTER CONSORTIUM FOR HIGHER EDUCATION

five-year period annual state appropriations for operation have gone from about $32,000,000 to approximately $69,365,000. The total 1970-71 expenditures of $112,720,000 were—once again—the largest ever for the University.

Despite this high level of general support, areas of sharp need remain. The most pressing is money for books and journals at the three campus libraries. The campuses are being forced to use the scarce funds available for educational innovation to supplement their library budgets. The Boston campus has only half as many books as national standards suggest for the present enrollment—and the enrollment is increasing very rapidly.

The second area of particular need is student scholarships and loans. Despite the accelerated level of support from the General Court, we can meet only a fraction of present requests for financial aid. If the University is to fulfill its historic commitment to equal opportunity, if the children of the poor are not to be frozen out of university education, we will have to get more funds for this purpose and make the ones we have go further.

The new decade calls us to a great exercise in imagination, energy, and will. The stakes may well be the future of higher education.



Robert Wood
President

"We affirm the continuity of three traditions:

A tradition of scholarship that goes back seven centuries to the medieval university.

A tradition of public education that was written into the Constitution of Massachusetts in 1780.

A tradition of service that was central to the origins of this University in 1863.

These traditions are our strength and salvation. And it is deeply in my nature to preserve and cherish them."

"If we don't try consciously to shape the University's future, the pressures of growth will shape it for us. And we will replicate the past."

PRESIDENT WOOD TALKS WITH STUDENTS DURING ONE OF HIS FREQUENT CAMPUS VISITS.

Report of the Treasurer

Summary of Operating Funds
Fiscal Year Ending June 30, 1971

Where the Operating Dollar Comes From . . .
Amherst, Boston, Worcester

	Total Amount	Percent of Total
From University Receipts:		
Tuition	$ 4,684,762.01	3.66
Residence Halls	463,218.51	.36
Sales and Services	608,277.50	.47
Total University Receipts	5,756,258.02	4.49
Net Funds From Taxpayers of the Commonwealth	63,608,731.66	49.69
Sub-Total	69,364,989.68	54.18
Federal Government	13,042,474.31	10.19
Student Activities	2,768,168.22	2.16
Student Aid Funds	509,334.84	.40
Student Loan Funds Notes Receivable	3,109,064.65	2.43
Gifts and Grants	6,897,056.35	5.39
Auxiliary Enterprises	27,410,486.55	21.41
Endowment Income	153,998.76	.12
Agency Funds	4,768,333.62	3.72
Total Funds Available	$128,023,906.98	100.00

How It Is Spent . . . Amherst, Boston, Worcester

	Total Amount	Percent of Total
Instruction		
State Funds	$ 35,497,162.32	31.49
Federal Funds	2,953,656.28	2.62
Gifts and Grants	487,091.10	.43
Total Instruction	38,937,909.70	34.54
Library	3,270,028.20	2.90
Research	6,963,419.43	6.18
Public Service		
Agricultural Extension	2,380,432.85	2.11
State Agricultural Control Services	467,125.43	.41
Operation of Plant and Space Rentals	10,539,591.68	9.35
Administration	6,699,781.55	5.95
Student Service	2,582,134.00	2.29
Scholarships	2,825,008.20	2.51
Student Loan Funds Notes Receivable	3,502,524.05	3.11
Student Activities	2,415,908.19	2.14
Auxiliary Enterprises	25,033,113.97	22.21
Agency and Miscellaneous	7,102,923.05	6.30
Total Funds Used	$112,719,900.30	100.00
Balance Carried Forward (Restricted Funds*)	15,304,006.68	
Total Funds Used and Balances	$128,023,906.98	

**Balances, restricted funds, beginning of report year, $14,430,778.82*

ANNUAL REPORT

OFFICE OF ADMISSIONS AND RECORDS

JULY 1, 1970 - JUNE 30, 1971

1. Expenditures and Appropriations

Purpose	Expenditures 1968-69	Expenditures 1969-70	Allotment 1970-71
01 Salaries, Permanent	---	---	---
02 Salaries, Other	---	---	---
03 Services, Non-Empl.	39,531.47	65,916.19	50,000.00
10 Travel	2,835.01	2,411.47	2,400.00
11 Advert. & Print	2,256.37	4,009.60	4,500.00
12 Maint. & Repro.	665.44	906.20	815.00
13 Special Supplies	12,316.98	13,186.91	15,000.00
14 Office & Admin.	10,980.36	10,376.67	7,000.00
15 Equip.	463.98	00.00	302.00
16 Rentals	7,589.60	9,763.56	11,565.00
Totals	66,639.21	106,570.60	91,582.00

2. Personnel

	1968-69	1969-70	1970-71
Dean of Admissions & Records	1	1	1
Associate Dean of Admissions	3	3	3
Asst. Dean of Admissions	1	1	2
Registrar	1	1	1
Staff Assistant (Recorder)	1	1	1
Staff Assistant (Asst. to Registrar)	0	1	1
Staff Assistant (Admissions)	2	2	1
Head Clerk	1	1	1
Principal Clerk	1	1	1
Senior Clerk-Steno	1	1	1
Senior Clerk-Typist	3	4	8
Junior Clerk-Steno	7	5	4
Junior Clerk-Typist	10	12	11
Statistical Machine Operator	1	1	1

3. Organization of Office of Admissions and Records

Dean of Admissions and Records - 1
Associate Dean of Admissions - 3
Assistant Dean of Admissions - 2
Registrar - 1
Staff Assistant (Recorder) - 1
Staff Assistant (Admissions) - 1
Staff Assistant (Registrar) - 1
Head Clerk - 1
Principal Clerk - 1
Senior Clerk-Steno - 1
Senior Clerk-Typist - 8
Junior Clerk-Steno - 4
Junior Clerk-Typist - 11
Statistical Machine Operator - 1

AMHERST, MASS.

4. Students or Clientele Served

See Appendix I, Annual Report of Admissions and Records

5. Faculty Publications

None

6. Major Accomplishments

Applications for admission to the freshman class numbered approximately 21,000. Transfer applicants numbered 6,200.

Pre-selection in college admissions at the University of Massachusetts using methods of data processing and multiple variable prediction enabled a staff of four admissions officers to efficiently process 21,000 freshman applications and admit a class of 3,600 highly qualified applicants at Amherst.

Total contacts in the Admissions Office (applications, College Board scores, and interviews) numbered 200,000.

7. Special Projects

See Appendix I, Annual Report of Admissions and Records (pages 1-2)

8. Personnel Needs

Senior Clerk-Typist (1), Junior Clerk-Stenographer (4), 4 Staff Assistants (2 Admissions, 1 Records, 1 Financial Aid). In order to handle the increased number of applications and the record-keeping functions efficiently, it is essential that an orderly expansion of the clerical staff in the Admissions and Records Office be planned for the future. As the size of undergraduate classes increase, the amount of work relating to maintenance of permanent record cards increases. These positions are needed in the Office of Admissions and Records.

ANNUAL REPORT

of the

ADMISSIONS AND RECORDS COMMITTEE

Presented by

William D. Tunis, Chairman

at the

173rd Meeting of the Faculty Senate

April 1, 1971

Committee Membership

Arlan F. Barber	School of Physical Education
Ruth C. Boicourt	School of Home Economics
Joseph T. Borrego	Graduate School
Robert W. Gage	Administration
Lawrence A. Johnson	School of Business Administration
Ralph D. Jones E Sec.	Office of Admissions and Records
Jane Nicholson	School of Nursing
David O'Connell	Humanities
J. Alfred Southworth	Administration
Herbert Steeper	Social Sciences
David A. Storey	College of Agriculture
Leverne Thelen	School of Education
William D. Tunis E Chmn.	Office of Admissions and Records
James F. Walker	Natural Science and Mathematics
Roscoe F. Ward	School of Engineering

A. Summary of activities of the Board of Admissions and Records, student petitions

Petitions	Granted	Denied
Readmissions	39	25
Senior credits in absentia	1	0
Waiver of a graduation requirement	10	11
Waiver of 10 semester rule	18	1
Request for graduation with honors with less than 60 credits in residence	2	2
Admission of transfer student	0	3
Waiver of 45 credit residence regulation	2	0
Change pass-fail option	15	1
Second undergraduate degree	2	0
Admission of transfer with less than 54 hours	2	0
Second undergraduate major	1	0
Request for transfer credit (D grade)	0	2
Permission to graduate with less than 1.8	5	0
Retroactive withdrawal	13	6

B. General policies and guidelines voted by the Board of Admissions and Records

1. It was the consensus of the Board that the practice of requiring averages higher than that required for retention in the University as a pre-requisite for entrance to major in a specific department is not in the best interests of the individual students or the University community as a whole.

2. Board voted that "the close date for the 'W' period be established as eight weeks following the first day of classes of the semester". Transmitted to Faculty Senate.

3. It was the consensus of the Board that the Admissions Office should continue with 54 or more transferable credits as a working guideline for considering applications for transfer into the University.

4. Voted that Engineering students participating in the Cooperative Program would have this notation on the student's permanent record card.

5. Board voted that student's name of record on file in the Registrar's Office be the name that appears on the diploma.

6. Board voted that at least 45 semeester credits be earned in residence at the University be required - previous terminology indicated 45 credits taken rather than earned.

7. Board voted that any University of Massachusetts graduates desiring a second undergraduate degree may be obtained by the student completing a minimum of 30 additional credits in residency plus meeting the requirements as set forth by the Department.

8. The problem of "pending" credits for incoming transfer students in terms of appropriate department to consult in cases of "questionable" upper level courses (should we consult the student's major department or the department on campus which offers courses in the questionable area). Concensus of Board members is to consult the department which offers courses on campus rather than the student's major department.

1. ADMISSIONS

A. Admissions Data Class 1974 and Trends

1. Total Freshman Completed Applications

	Men	Women	Total
Sept. 1960	3,668	2,271	5,939
Sept. 1961	4,029	2,492	6,521
Sept. 1962	4,271	2,659	6,930
Sept. 1963	4,408	3,139	7,547
Sept. 1964	6,681	5,188	11,867
Sept. 1965	6,306	5,493	11,799
Sept. 1966	8,237	6,597	14,834
Sept. 1967	9,669	7,679	17,348
Sept. 1968	10,091	8,255	18,346
Sept. 1969	11,236	9,254	20,490
Sept. 1970	10,147	8,372	18,519

2. Freshman Students Accepted and Enrolled

	Men	Women	Total
Sept. 1960	1,009	716	1,725
Sept. 1961	1,229	689	1,918
Sept. 1962	1,155	767	1,922
Sept. 1963	1,287	999	2,286
Sept. 1964	1,318	1,274	2,592
Sept. 1965	1,407	1,215	2,622
Sept. 1966	1,599	1,355	2,954
Sept. 1967	1,715	1,325	3,040
Sept. 1968	1,701	1,406	3,107
Sept. 1969	1,805	1,781	3,586
Sept. 1970	1,933	1,638	3,571

3. New Freshmen (not including transfer, former students or those demoted)

Class	Selected		Paid		Paid and Withdrawn		Paid less those Withdrawn	
	M	W	M	W	M	W	M	W
1966	2127	1318	1400	1007	304	249	1096	758
1967	2421	1757	1519	1287	318	281	1201	997
1968	2373	2132	1516	1670	395	340	1121	1330
1969	2762	2214	1822	1545	486	346	1336	1199
1970	3790	2961	2144	1744	515	389	1599	1355
1971	4130	3069	2146	1645	504	340	1642	1305
1972	4346	3330	2221	1771	520	365	1701	1406
1973	4652	4096	2346	2122	541	341	1805	1781
1974	4639	3874	2319	1937	386	299	1933	1638

4. Per cent of loss based upon the number selected

Class	Men	Women
1964	44.9	41.3
1965	47.4	41.8
1966	48.9	42.4
1967	50.4	43.2
1968	52.8	37.7
1969	51.6	45.8
1970	57.8	54.2
1971	60.2	57.5
1972	60.9	57.8
1973	61.2	56.6
1974	58.3	57.7

5. Summary of New Freshman Applications
   a. Total completed applications 18,519
   b. Total selected from applications 8,513
   c. Total matriculated of those selected 3,571

6. Profile Class of 1974
   a. College Entrance Examination Board Scholastic Aptitude Test Scores
      1. Verbal

	Total		Males		Females	
	N	%	N	%	N	%
700-Up	96	2.9	47	2.7	49	3.2
650-699	215	6.6	104	5.9	111	7.3
600-649	449	13.7	195	11.1	254	16.7
550-599	678	20.7	356	20.3	322	21.1
500-549	816	24.9	444	25.4	372	24.4
450-499	603	18.4	355	20.3	248	16.3
400-449	286	8.7	167	9.5	119	7.8
350-399	107	3.3	62	3.5	45	3.0
300-349	24	0.7	20	1.1	4	0.3
200-299	1	0.1	1	0.1	0	0.0
Total	3275		1751		1524	

      2. Numerical

	Total		Males		Females	
	N	%	N	%	N	%
700-Up	158	4.8	117	6.7	41	2.7
650-699	378	11.5	255	14.5	123	8.1
600-649	618	18.8	371	21.1	247	16.2
550-599	834	25.4	437	24.9	397	26.0
500-549	706	21.5	330	18.8	376	24.6
450-499	399	12.2	170	9.7	229	15.0
400-449	135	4.1	54	3.1	81	5.3
350-399	44	1.3	16	0.9	28	1.8
300-349	7	0.2	3	0.2	4	0.3
200-299	1	0.1	0	0.0	1	0.1
Total	3282		1755		1527	

      3. Comparison Median Scores Classes of 1969, 1970, 1971, 1972, 1973 and 1974

Verbal					Numerical				
1970	1971	1972	1973	1974	1970	1971	1972	1973	1974
547	534	539	541	537	577	565	574	574	570

b. High School Rank (Class of 1974)

	Total		Males		Females	
	N	%	N	%	N	%
1-5%	542	16.9	177	10.4	365	24.2
6-10%	618	19.2	258	15.2	360	23.8
11-15%	553	17.2	260	15.3	293	19.4
16-20%	441	13.7	215	12.6	226	15.0
21-25%	326	10.2	211	12.4	115	7.6
26-35%	372	11.6	283	16.6	89	5.9
36-50%	206	6.4	174	10.2	32	2.1
51-75%	109	3.4	89	5.2	20	1.3
76-99%	44	1.4	34	2.0	10	0.7
Total	3211		1701		1510	

c. Medians - Class of 1974 (Special Summer - January)

	Total	Males	Females
CEEB - Verbal	479	480	478
CEEB - Mathematics	516	546	488

B. Admissions Data Transfers September 1970 and Trends

1. Completed Applications and Trends

	Completed Applications		Accepted and Enrolled	
	Men	Women	Men	Women
Sept. 1959	518	152	99	17
Sept. 1960	499	144	77	22
Sept. 1961	677	201	172	23
Sept. 1962	784	270	173	33
Sept. 1963	854	668	195	79
Sept. 1964	1006	452	233	114
Sept. 1965	1332	704	196	87
Sept. 1966	1582	874	451	231
Sept. 1967	1895	1115	472	239
Sept. 1968	1967	1309	514	318
Sept. 1969	2127	1493	649	436
Sept. 1970	2452	1652	652	299

2. Transfers Accepted

	1971	1972	1973	1974	Total
Men	1	432	176	43	652
Women	2	242	45	1	290
Total	3	674	221	44	942

C. Admissions Data Former Students September 1970 and Trends

	Men	Women
Former students who re-entered September 1960	83	14
Former students who re-entered September 1961	68	25
Former students who re-entered September 1962	106	32
Former students who re-entered September 1963	127	21
Former students who re-entered September 1964	205	45
Former students who re-entered September 1965	147	55
Former students who re-entered September 1966	209	135
Former students who re-entered September 1967	218	132
Former students who re-entered September 1968	251	113
Former students who re-entered September 1969	275	161
Former students who re-entered September 1970	381	180

D. Admissions Data (Transfers and Re-Entering) Spring Semester 1969-70

	1970	1971	1972	1973	1974	Total
Men	15	47	135	120	8	325
Women	9	35	81	51	5	181
Total	24	82	216	171	13	506

New Freshmen		69
Transfers		
	Class of 1970	0
	Class of 1971	19
	Class of 1972	123
	Class of 1973	46
	Class of 1974	3
Former Students Returning		
	Class of 1970	24
	Class of 1971	63
	Class of 1972	93
	Class of 1973	125
	Class of 1974	10

Total New Students Spring Semester 575

2. UNDERGRADUATE REGISTRATION AND TRENDS

A. Undergraduate Registration September 1970

Class	1971		1972		1973		1974		Total		Total
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
Agriculture	229	71	257	20	200	25	156	20	842	86	928
Arts and Sciences	1024	758	1241	821	1324	1155	1233	1089	4822	3823	8645
Business Admin.	361	27	421	17	271	16	240	14	1293	74	1367
Education	59	328	59	366	38	279	24	217	180	1190	1370
Engineering	194	2	250	2	248	5	289	8	981	17	998
Home Economics	0	123	1	161	1	148	1	111	3	543	546
Nursing	1	63	3	77	3	109	2	107	9	356	365
Physical Education	130	68	142	100	106	74	87	71	465	313	778
Public Health	7	23	6	24	9	27	4	15	26	89	115
TOTAL	2005	1393	2380	1588	2200	1840	2036	1652	8621	6491	15,112
TOTAL BY CLASSES	3398		3968		4040		3688		15,112		
Non-Classified									16	63	79
Specials									45	116	161
TOTAL UNDERGRADUATES									8682	6670	15,352

B. Undergraduate Residence September 1970

Massachusetts	13,988
Other States	1,168
Foreign	106
Total	15,262

C. Enrollment Trends - Total Undergraduates

Year	Men	Women	Total
1953	2267	1220	3487
1954	2479	1224	3703
1955	2459	1169	3628
1956	2581	1212	3793
1957	2650	1341	3991
1958	2772	1495	4267
1959	3090	1765	4855
1960	3257	2000	5257
1961	3549	2135	5684
1962	3759	2381	6140
1963	4125	2757	6882
1964	4617	3360	7977
1965	5049	3886	8935
1966	5816	4615	10,431
1967	6503	5071	11,574
1968	7181	5457	12,638
1969	7968	6275	14,243
1970	8663	6599	15,262

D. Enrollment Trends - Freshman Men and Women

Class	Men	Women	Total
1959	698	390	1088
1960	723	425	1148
1961	730	536	1266
1962	828	538	1366
1963	1135	703	1838
1964	1009	716	1725
1965	1229	689	1918
1966	1155	767	1922
1967	1287	999	2286
1968	1318	1274	2592
1969	1407	1215	2622
1970	1599	1355	2954
1971	1715	1325	3040
1972	1701	1406	3107
1973	1805	1781	3586
1974	2040	1653	3693

E. Enrollment Trends - Freshman Enrollment by Schools

Class	Arts & Science	Engin.	Ed.	Bus. Adm.	Agric.	Home Econ.	Phys. Ed.	Nursing	Pub. Health
1959	519	295		93	86	52	20	23	
1960	588	309		107	61	40	18	25	
1961	607	309	90	116	55	45	23	21	
1962	694	300	80	125	69	35	38	25	
1963	987	321	127	173	92	37	63	39	
1964	972	317	117	115	80	25	62	37	
1965	1164	298	102	135	86	26	71	36	
1966	1168	268	116	133	93	37	65	42	
1967	1468	277	127	140	92	65	51	51	
1968	1656	303	167	132	86	72	75	69	32
1969	1553	275	158	178	116	97	138	68	25
1970	1777	278	171	195	162	102	140	89	52
1971	1770	278	151	248	155	122	197	93	26
1972	1883	321	190	271	122	107	182	83	29
1973	2451	324	232	237	150	95	154	91	26
1974	2322	297	241	254	176	112	158	109	19

F. Undergraduate Registration - Spring Semester 1969-70

Class	Men	Women	Total
1970	1476	1196	2672
1971	2114	1477	3591
1972	1845	1442	3287
1973	2089	1913	4002
1974	48	21	69
Total	7572	6049	13,621
Non-Classified	16	67	83
Specials	34	96	130

G. Summer School Enrollment 1970

Class	Main Session M	Main Session F	Swingshift Session M	Swingshift Session F	Short Sessions M	Short Sessions F
1970	86	69			29	27
1971	217	169			61	48
1972	181	119			35	19
1973	92	66			19	4
1974	30	20	161	151	2	1
NC	3	14			1	3
SP	19	33			8	15
SS	196	195			37	66
TOTAL UNDERGRADUATE STUDENTS	824	685	161	151	192	183
	1509		312		375	
TOTAL GRADUATE STUDENTS	983	650			125	105
	1633				230	
TOTAL GRADUATE & UNDERGRADUATE	1807	1335	161	151	317	288
GRAND TOTALS	3142		312		605	
GRAND TOTAL		4059				

SUMMARY OF SUMMER SESSION TOTALS				
	Men	2285	Undergraduate	2196
	Women	1774	Graduate	1863
		4059		4059

H. Distribution of Undergraduate Enrollment by Majors - September 1970

Curriculum	College of Arts and Sciences 1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
CA S	12	8	101	42	511	376	519	344	1143	770	1913
HONORS			3	1	45	66	39	64	87	131	218
ASTRON	1		4		4	1	8	2	17	3	20
MICBIO	16	3	10	4	4	3	5	5	35	15	50
PSYCH	1								1		1
BOTANY	5	7	9	6	3	5	10	3	27	21	48
CHEM	21	4	33	6	33	5	34	15	121	30	151
BIOCHEM	5	1	7	1	9	4	25	8	46	14	60
ECON	62	3	47	4	19	1	12	1	140	9	149
ENGL	133	188	133	144	71	106	34	81	371	519	890
JS ENG	13	3	7	13	6	8	11	12	37	36	73
JS DM			1	2	1	1	1	4	3	7	10
JS INT	2	2	6	3	3	3			11	8	19
GEOG			8	1	4		1		13	1	14
GEOL	23	5	18	4	13	2	9	5	63	16	79
ART	10	36	24	48	27	52	18	55	79	191	270
BFA	9	36	15	19	6	31	2	4	32	90	122
GERMAN	5	4	7	3	2	6	2	10	16	23	39
ANTH			1		1			2	2	2	4
HIST	150	63	152	50	83	39	46	25	431	177	608
GOVT	122	29	145	38	95	23	74	24	436	114	550
MATH	51	26	60	41	83	58	79	74	273	199	472
MUSIC			2		2	3	4	3	8	6	14
B MUS	7	6	5	7	10	9	10	12	32	34	66
PHIL	14	5	10	1	8	1	12	2	44	9	53
PHYSIC	16		18	1	15	1	13	5	62	7	69
PSYCH	126	81	149	122	116	135	107	127	498	465	963
CLSICS	1	2	2	3			1	4	4	9	13
FRENCH	5	29	2	39	7	43	9	25	23	136	159
SPAN	6	10	8	16	3	23	2	12	19	61	80
ITAL	1	1	2		1	1			4	2	6
RUSS	4	6	1	6	4	3	4	1	13	16	29
LATIN		2								2	2
SOCIOL	90	119	99	100	37	74	38	77	264	370	634
ANTH	21	14	25	13	7	5	12	9	65	41	106
SPEECH	3	2	5	9	8	10	11	27	27	48	75
THEATR	6	9	12	6	7	9	2	2	27	26	53
MASSCM	17	1	24	2	8	3	2	1	51	7	58
COMDIS	1	24	1	21	1	18		1	3	64	67
RHETPA	1								1		1
SPEDUC	1	5	1	4		3			2	12	14
ZOOL			1						1		1
ZOOL	47	21	64	38	63	24	74	42	248	125	373
PREMED	12	3	12	1	1		1		26	4	30
PREDNT	3		4		1		1		9		9
PREVET			3				1	1	4	1	5
COMLIT	1			2	2				3	2	5
TOTALS	1024	758	1041	821	1324	1155	1233	1089	4822	3823	8645

College of Agriculture

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
C AGR			5	1	2	1	2		9	2	11
A&F EC	15		12		19	1	4		50	1	51
AG ENG							3		3		3
PLSOIL	15	2	7	2	10	1	6	1	38	6	44
AN SCI	14	10	15	5	23	12	23	12	75	39	114
ENT			3		5		2		10		10
PLPATH					1				1		1
FD SCI	7	3	3	2	4	1	3		17	6	23
HTADM	50	3	58	2	39	2	27		174	7	181
FOREST	25		24		19		35		108		108
WILDLF	30		26	3	30	3	23	6	109	12	121
FISH	20	1	17	1	9	2	9		55	4	59
WDTECH	9		17		7		3		36		36
LD ARC			1		2				3		3
ENVDES					1				1		1
PK ADM	19		12		6		8		45		45
ENVDES	24	1	50	4	23	2	8	1	105	8	113
PREVET	1	1	2						3	1	4
TOTALS	229	21	257	20	200	25	156	20	842	86	928

School of Business Administration

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
S BA	30	2	160	9	250	14	237	14	677	39	716
ACCTG	62	10	72	6	3		1		138	16	154
GB FIN	90	7	57		3				150	7	157
MGT	85	1	55		11				151	1	152
MKTG	94	7	77	2	4	2	2		177	11	188
TOTALS	361	27	421	17	271	16	240	14	1293	74	1367

School of Engineering

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
ENGIN	2		17		62		283	8	364	8	372
CH E	28	1	19		22				69	1	70
C E	36	1	77		49	2	2		164	3	167
CS ENG	1				1	1			2	1	3
E E	54		48		46	1	4		152	1	153
I E	23		24	1	10	1			57	2	59
M&A E	50		65	1	58				173	1	174
TOTALS	194	2	250	2	248	5	289	8	981	17	998

School of Home Economics

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
H EC		83		97		85	1	100	1	365	366
HUMDEV		40	1	64	1	63		11	2	178	180
TOTALS		123	1	161	1	148	1	111	3	543	546

School of Nursing

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
NURSE	1	63	3	77	3	109	2	107	9	356	365
TOTALS	1	63	3	77	3	109	2	107	9	356	365

School of Physical Education

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
MEN PE	114		131		101		85		431		431
WO PE		59		87		64		69		279	279
REC	16	9	11	13	5	10	2	2	34	34	68
TOTALS	130	68	142	100	106	74	87	71	465	313	778

School of Education

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
EDUC	59	328	59	366	38	279	24	217	180	1190	1370
TOTALS	59	328	59	366	38	279	24	217	180	1190	1370

Department of Public Health

Curriculum	1971		1972		1973		1974		Total		Grand Total
	M	F	M	F	M	F	M	F	M	F	
PUB HL	4	5	5	4	5	3	2	4	16	16	32
MEDTEC	3	18	1	20	4	24	2	10	10	72	82
PSYCH	—	—	—	—	—	—	—	1	—	1	1
TOTALS	7	23	6	24	9	27	4	15	26	89	115

3. RECORDS

A. Withdrawals

1. Academic Terminations - college year 1969-70

Scholastic Terminations January 1970. Includes those terminated but reinstated.

Class	Men			Women			Total
	**1stSem.	*Susp.	*Dis.	**1stSem.	*Susp.	*Dis.	
1970	0	18	10	0	4	1	33
1971	27	11	14	19	3	4	78
1972	17	49	18	1	16	6	107
1973	28	14	11	37	5	0	145
	122	92	53	57	28	11	363

***Scholastic Terminations June 1970. Includes those terminated but reinstated.

Class	Men			Women			Total
	**1stSem.	*Susp.	*Dis.	**1stSem.	*Susp.	*Dis.	
1970	0	0	0	0	1	0	1
1971	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0
1973	0	1	0	0	1	0	2
1974	0	0	0	0	0	0	0
	0	1	0	0	2		3

*Suspension is a first academic termination. Dismissal is a second, and final, academic termination.

**First semester freshmen and transfer students allowed to register by action of the Faculty Senate. First semester freshmen not charged with academic termination.

***This was the Student Strike semester.

2. Trend in academic terminations for freshman year

Class	Number of terminations in freshman year	Total enrollment Sept. of freshman year	Rate of terminations in per cent
1958	172	1182	14.5
1959	129	1088	11.8
1960	144	1148	12.5
1961	167	1266	13.2
1962	166	1366	12.15
1963	270	1838	14.7
1964	315	1725	18.3
1965	406	1918	21.1
1966	312	1922	16.2
1967	297	2286	12.9
1968	338	2592	13.0
1969	356	2622	13.6
1970	406	2954	13.8
1971	339	3040	11.2
1972	333	3188	10.4
1973	145	3820	3.8

3. Scholastic Probations 1969-70

Class	Total
1970	15
1971	27
1972	36
1973	30
	108

4. Summary of Withdrawals - college year 1969-70

a. Withdrawals during fall semester

Reasons	1970		1971		1972		1973		NC		SP		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
Diff. w. Studies	2	0	6	0	5	1	2	0	0	0	0	1	17
Financial	0	1	2	2	5	2	0	1	0	2	0	0	15
Transfer	0	0	5	1	0	1	5	2	0	0	0	0	14
Discipline	0	0	0	0	0	0	0	0	0	0	0	0	0
Personal	23	14	45	17	55	19	26	13	0	5	2	7	226
Mil.Enlist/Induct.	0	0	0	0	3	0	1	0	0	0	0	0	4
Health	6	3	7	3	6	5	6	9	0	0	0	1	46
Reason Unknown	0	0	1	1	3	0	1	0	0	0	0	0	6
Marriage	0	1	0	2	0	3	0	2	0	0	0	0	8
TOTALS	31	19	66	26	77	31	41	27	0	7	2	9	336

b. Withdrawals between the fall and spring semesters

Reasons	1970		1971		1972		1973		Totals
	M	F	M	F	M	F	M	F	
Diff. w. Studies	3	3	0	2	0	0	1	0	9
Financial	3	1	8	3	2	5	6	3	31
Transfer	3	5	7	19	8	12	12	15	81
Discipline	0	0	0	0	0	0	0	0	0
Personal	4	2	18	22	18	17	14	15	110
Mil.Enlist/Induct.	2	0	2	0	1	0	3	0	8
Health	0	0	0	0	0	0	0	1	1
Reason Unknown	33	42	40	25	46	38	42	38	304
Marriage	0	1	0	2	0	5	0	4	12
TOTALS	48	54	75	73	75	77	78	76	556

c. Withdrawals during spring semester

Reasons	1970		1971		1972		1973		1974		NC		SP		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
Diff. w. Studies	0	0	1	1	2	0	2	0	0	0	0	0	0	0	6
Financial	1	0	4	3	2	1	0	0	0	0	0	0	0	0	11
Transfer	0	0	1	0	0	0	0	2	0	0	0	0	0	0	3
Discipline	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Personal	6	6	22	19	16	11	22	15	1	1	1	1	1	3	135
Mil.Enlist/Induct.	1	0	4	0	3	0	1	0	0	0	0	0	0	0	9
Health	2	1	6	1	4	5	3	1	0	0	0	0	0	0	23
Reason Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marriage	0	0	0	0	0	1	2	1	0	0	0	0	0	0	4
TOTALS	10	7	48	24	27	18	30	19	1	1	1	1	1	3	191

d. Withdrawals between end of spring semester and September 1970

Reasons	1971		1972		1973		1974		NC		SP		Totals
	M	F	M	F	M	F	M	F	M	F	M	F	
Diff. w.Studies	0	0	0	0	0	0	0	0	0	0	0	0	0
Financial	6	3	2	1	9	12	0	1	0	0	0	0	34
Transfer	11	17	28	54	33	28	1	7	0	0	0	0	179
Discipline	0	0	0	0	0	0	0	0	0	0	0	0	0
Personal	7	16	8	20	9	21	0	0	0	0	0	0	81
Mil.Enlist/Ind.	15	0	6	0	2	0	0	0	0	0	0	0	23
Health	0	1	1	0	0	0	0	0	0	0	0	0	2
Reason Unknown	82	64	71	74	95	83	6	3	0	0	0	0	478
Marriage	1	6	0	7	0	4	0	2	0	0	0	0	20
TOTALS	122	107	116	156	148	148	7	13	0	0	0	0	817

B. Class and University yearly grade point averages 1969-70

Class of 1970	Number of Students	Average of Averages
Men	3139	2.7423
Women	2307	2.6293
Class	5446	2.6945
Class of 1971		
Men	4408	2.6224
Women	2995	2.7480
Class	7403	2.6732
Class of 1972		
Men	3666	2.5600
Women	2889	2.7904
Class	6555	2.6615
Class of 1973		
Men	3963	2.6246
Women	3678	2.8277
Class	7641	2.7224
Class of 1974		
Men	46	2.7913
Women	24	2.8666
Class	70	2.8171
Total		
Men	15,222	2.6332
Women	11,893	2.7602
University	27,115	2.6889

C. Bachelors Degrees awarded 1970. Students who received degrees in calendar year 1970 graduated as of the class of 1970.

School	February	June	September	Total
Arts and Science				
B.A.	153	859	148	1160
B.S.	32	252	32	316
B.F.A.	7	24	6	37
B.M.	0	12	0	12
Agriculture				
B.S.	37	143	20	200
Business Administration				
B.B.A.	56	238	37	331
Engineering				
B.S. Ch.E.	2	17	0	19
B.S. C.E.	19	21	4	44
B.S. E.E.	6	29	3	38
B.S. M.E.	14	34	1	49
B.S. I.E.	4	14	5	23
B.S. A.E.	4	16	2	22
Education				
B.A.	38	267	38	343
Home Economics				
B.S.	15	86	11	112
Nursing				
B.S.	2	54	2	58
Physical Education				
B.S.	35	87	13	135
Public Health				
B.S.	2	18	13	33
GRAND TOTAL	426	2171	335	2932

D. Transcripts of Records issued July 1, 1969 to June 30, 1970

Number of free transcripts	11,929
Number of paid transcripts	21,947
Transcripts for other offices	26,426
Transcripts for scholarships	169
GRAND TOTAL	60,471

University of Massachusetts

Amherst

ANNUAL REPORT

College of Agriculture

July 1, 1970 - June 30, 1971

A. A. Spielman, Dean

July 1971

TABLE OF CONTENTS

		Page
I.	BUDGET	1
II.	ORGANIZATIONAL CHART	2
III.	PERSONNEL - NUMBER IN EACH RANK	
	A. Academic Personnel	3
	B. Non-Academic Professional Personnel	3
	C. Appointments and Retirements	4
	RESIDENT INSTRUCTION HIGHLIGHTS	5
IV.	STUDENTS	
	A. Total Class Enrollments - Credits Generated (1970-71)	8
	B. Enrollment	
	1. Breakdown of Student Enrollment by Majors - Fall 1970	9
	2. Undergraduate Enrollments by Major - 1963-1970	10
	3. Freshmen and Transfer Students Enrolled - Fall 1970 (Undergraduates)	11
	4. Source of Transfer Students - 1970	12
	5. Applications for Entrance - September 1970	13
	6. Stockbridge School Enrollments by Major - 1963-70	14
	7. Number of Graduate Students and Post-Doctoral Fellows; Number of Degrees Awarded	15
	8. Graduate Enrollments by Departments - 1963-70	16
	C. Academic Honors - Class of 1971	
	1. Undergraduate	17
	2. Stockbridge School	17
	D. Student Accomplishments and Recognition	18
V.	STUDENT-FACULTY INTERACTION	22
VI.	NEW COURSES APPROVED	26
VII.	FACULTY	
	A. Summary of Faculty Publications	27
	B. Faculty Awards, Citations and Professional Recognition	28
	C. Faculty Offices and Committee Memberships Held in Professional Societies	36

(continued)

TABLE OF CONTENTS (continued)

	Page
RESEARCH HIGHLIGHTS	45
D. Research Projects	47
E. Cooperative Programs With Other Schools and Colleges Within and Without the University	58
COOPERATIVE EXTENSION HIGHLIGHTS	62
VIII. SPECIAL PROGRAMS	
A. Center for International Agricultural Studies	
1. UMass/AID/Malawi Project (AID/437)	66
2. Peace Corps Intern Program	66
3. International Training Program (AID/399)	67
B. Civil Defense Training Program	68
C. Miscellaneous	69
IX. CONTROL PROGRAMS	
A. Pullorum Disease Eradication	70
B. *Mycoplasma gallisepticum* Testing	70
C. Mastitis Testing	70
D. Regulatory Services (Feed, Fertilizer, Dairy Laws, and Seed Laboratory)	71
E. Shade Tree Laboratories	71
F. Diagnostic Laboratories	72
1. Diagnostic Summary	73
2. Control Services (Samples Tested)	73

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I. BUDGET*

	1969	1970	1971
A. INSTRUCTION	$1,655,743.00	$1,947,210.00	$2,548,500.00
B. EXPERIMENT STATION			
State	1,184,924.00	1,414,652.00	1,215,810.00
Non-State	882,349.00	1,021,565.00	1,500,000.00
C. COOPERATIVE EXTENSION			
State	626,625.00	773,016.00	872,317.00
Non-State	791,099.00	1,042,442.00	1,595,434.00
County Funds			1,500,000.00
D. CONTROL SERVICE	374,404.00	468,641.00	465,800.00
TOTALS	$5,515,144.00	$6,667,526.00	$9,697,861.00

*Estimated from June 1, 1971 Allotment Control Register.

II ORGANIZATIONAL CHART

DEPARTMENTS AND DIVISIONS	RESIDENT INSTRUCTION Assoc. Degree	B.S. Degree	Grad. Degree	EXPERIMENT STATION	COOPERATIVE EXTENSION	CONTROL PROGRAM
Agricultural and Food Economics	X	X	X	X	X	
Food and Agricultural Engineering		X	X	X	X	
Cranberry Station				X	X	
Entomology		X	X	X	X	
Environmental Sciences	X			X	X	
Food Science and Technology	X	X	X	X	X	
Forestry and Wildlife Management	X	X	X	X	X	
4-H and Youth Programs					X	
*Home Economics Extension					X	
Hotel, Restaurant and Travel Administration	X	X			X	
Landscape Architecture and Regional Planning	X	X	X	X		
Plant Pathology		X	X	X	X	X
Plant and Soil Sciences	X	X	X	X	X	
Suburban Experiment Station				X	X	X
**Regulatory Services				X		X
Veterinary and Animal Sciences	X	X	X	X	X	X

*In School of Home Economics
**Feed, Fertilizer, Dairy Law, and Seed Laboratory

III. PERSONNEL - NUMBER IN EACH RANK

A. ACADEMIC PERSONNEL	September 1968	September 1969	September 1970
Dean	1	1	1
Associate Dean and Director of Stockbridge School	1	1	1
Associate Dean and Associate Director of Experiment Station	0	0	1
Associate Dean and Associate Director of Cooperative Extension	1	1	1
Assistant Dean, College of Agriculture	0	1	1
Commonwealth Head of Department	1	1	1
Head of Department "A"	11	11	10
Head of Department, UM	1	2	2
Commonwealth Professor, UM	1	1	1
Professor "A"	44	41	50
Professor, UM	8	9	11
Associate Professor "A"	40	41	38
Associate Professor, UM	11	10	19
Assistant Professor "A"	20	27	24
Assistant Professor, UM	19	24	21
Instructor "A"	12	11	4
Instructor, UM	2	4	2
Visiting Lecturer	1	2	3
Lecturer "A", UM	0	1	3
Lecturer, UM	6	2	1
Lecturer, UM, 1/2 time	0	1	1
TOTAL (does not include vacancies)	189	191	196

B. NON-ACADEMIC PROFESSIONAL PERSONNEL			
Assistant to Dean and Director	1	1	1
Staff Associate	1	1	1
Staff Assistant	3	3	3
	5	5	5

C. APPOINTMENTS

1. Dr. William J. Mellen, Associate Dean of Agriculture and Associate Director of the Agricultural Experiment Station, July 1970

   Dr. John W. Denison, Assistant Dean of Agriculture and Director of Stockbridge School, January 1971

2. New Faculty

   Entomology
   - Edward N. Tobin, Lecturer, UM, Part-time
   - Donald W. Hall, Assistant Professor
   - S. Salman Wasti, Assistant Professor

   Environmental Sciences, Amherst
   - Robert A. Coler, Assistant Professor

   Forestry and Wildlife Management
   - James E. Johnson, Assistant Professor

   Landscape Architecture and Regional Planning
   - Barrie B. Greenbie, Associate Professor
   - Edwin T. Warner, Visiting Lecturer

   Veterinary and Animal Sciences
   - Robert T. Duby, Assistant Professor

3. Retirements

   4-H:
   - Mildred L. Howell, Associate Professor

   Administration:
   - Fred P. Jeffrey, Associate Dean and Director of Stockbridge School

RESIDENT INSTRUCTION HIGHLIGHTS

- Undergraduate enrollments in the College continue to increase at a rate approximately twice that calculated for the 68 member institutions of the National Association of State Universities and Land-Grant Colleges. In four-year enrollment, the University ranks 20th nationally, excluding the Stockbridge School which is the largest program of its kind in the nation. These increases in enrollment are occurring at a time when 32 of the 68 member institutions of NASULGC report decreases in agricultural enrollments.
- Departments are constantly reviewing and revising curricula, and expanding offerings to meet the needs and demands of our changing clientele. There is a renewed interest among urban youth in food production and processing, and in the conservation of natural resources. These students define agriculture broadly as man's relationship to his plant, animal, land, and water resources, and insist upon professional training in areas much broader than production agriculture. So far as is possible and practical, the College is responding to these needs.
- Due to redirection of emphasis or broadening of scope, several departments received Board of Trustee approval for department name modifications:

  Department of Food and Agricultural Engineering, formerly Agricultural Engineering, is placing greater emphasis on storage and handling of biological materials. Several new courses in this area have already been approved.

  Department of Landscape Architecture and Regional Planning, formerly Landscape Architecture, modified its name to better identify its scope of activities and degree offerings.

Department of Hotel, Restaurant, and Travel Administration, formerly Hotel and Restaurant Administration, has broadened its offerings to include the travel business which is beginning to dominate the entire accommodation-food service industry.

- The College continues to develop courses of general interest to university students at large. Wherever appropriate, it has requested, and received, university core designation for certain courses in order to make them available to a wider range of students and to alleviate some of the pressure on the traditional core courses.

Notable success has been achieved with one course this year, Food Science 101, The Struggle for Food (E). First offered Spring semester 1971, the course attracted 265 students. Student pressure demanded that it be taught both semesters and over 700 students have preregistered for the course this Fall.

- A growing interest by non-majors in resource-oriented courses is exemplified by increased enrollments in certain courses. A trial, unstructured course entitled Laral Ecology drew more than 100 students from all over campus. Less than half the enrollment in certain forestry courses is made up of forestry majors. Marine Sciences 265/565 Introductory Oceanography, coordinated by Dr. Charles F. Cole of the Forestry and Wildlife Management Department, attracted over 100 students this year.

- The Department of Hotel, Restaurant, and Travel Administration obtained a grant from the Statler Foundation to conduct a summer short course for minority group hotel employees presently holding nonsupervisory jobs. The objective of the program was to upgrade the training of the participants

sufficiently so they could advance to supervisory or managerial status. The program could have widespread significance in the Hotel and Restaurant field since 30 to 50% of all employees are minority group members, mostly in nonsupervisory positions.

Several books were published by faculty members during 1970-71; noteworthy among them was a 2 volume, 700 page, advanced text entitled "Plant Parasitic Nematodes," edited by Bert M. Zuckerman, W. F. Mai, and Richard A. Rohde.

# #

IV. STUDENTS

A. TOTAL CLASS ENROLLMENTS AND CREDITS GENERATED (1970-71 ACADEMIC YEAR)

Department	2-Year SCRH	% Total 2-Year SCRH	4-Year SCRH	% Total 4-Year SCRH	Grad. SCRH	% Total Gr. SCRH	FTES	% Total FTES
Agricultural & Food Economics	2753	18.0	806	5.3	356	10.7	284.6	11.6
Entomology	719	4.7	534	3.5	97	2.9	95.7	3.9
Environmental Sciences	337	2.2	297	2.0	105	3.2	55.4	2.3
Food & Agricultural Engineering	1210	7.9	480	3.2	102	3.1	125.5	5.1
Food Science & Technology	1184	7.8	1341	8.9	470	14.2	227.1	9.3
Forestry & Wildlife	628	4.1	4559	30.1	708	21.4	434.3	17.8
Hotel, Restaurant & Travel Adm.	1452	9.5	1819	12.0	0	0	218.1	8.9
Landscape Architecture & Regional Planning	2160	14.1	3117	20.6	957	28.9	471.4	19.3
Plant & Soil Sciences	3322	21.7	721	4.8	181	5.5	292.1	11.9
Plant Pathology	373	2.4	73	0.48	90	2.7	41.0	1.7
Veterinary & Animal Sciences	1144	7.5	1407	9.3	249	7.5	201.2	8.2
COLLEGE TOTALS	15282	100	15154	100	3315	100	2446.4	100

SCRH = Student Credit Hours

FTES = Full Time Equivalent Students = $\frac{\text{Total 2-Yr. \& 4-Yr. SCRH}}{15} + \frac{\text{Total Grad. SCRH}}{8}$

(Each semester computed separately and totaled)

B. ENROLLMENTS

1. Breakdown of Student Enrollment by Majors - Fall 1970

Department and Major	Four Year	Two Year	Graduate	Department Total
1. Agricultural and Food Economics				120
General Agricultural Economics	15		5	
Agricultural Business Management	16	20	6	
Food Distribution		16		
Food Marketing Economics	6		2	
Lumber & Building Material Management		4		
Natural Resource Economics	9		8	
International Agricultural Studies	5		8	
2. Food & Agricultural Engineering	3		19	22
3. Entomology	10		17	27
4. Environmental Sciences				23
Environmental Technology		23		
5. Food Science and Technology				82
Food Science	25		50	
Food Processing Technology		7		
6. Forestry and Wildlife Management				428
Fisheries Biology	60		11	
Forestry	108		27	
Wildlife	121		32	
Wood Science and Technology	36		6	
Wood Utilization		27		
7. Hotel and Restaurant Administration	181	129		310
8. Landscape Architecture & Reg. Planning				365
Arboriculture and Park Management		94		
Environmental Design	117			
Landscape Architecture		38		
Landscape Operations		52		
Park Administration	45			
Regional Planning			19	
9. Plant and Soil Sciences				222
Floriculture		32		
Fruit and Vegetable Crops		18		
Plant Industry	24		24	
Plant Science	14			
Soil Science	6		12	
Turf Management		92		
10. Plant Pathology	1		11	12
11. Veterinary and Animal Sciences				247
Animal Science	120	70	33	
Laboratory Animal Management		24		
TOTALS	922	608	328	1,858

2. UNDERGRADUATE ENROLLMENTS BY MAJOR - FALL - 1963-1970

Major	1963	1964	1965	1966	1967	1968	1969	1970
Agricultural and Food Economics	13	11	21	26	35	43	50	51
Agricultural Engineering	4	3	3	7	8	5	6	3
*Entomology	12	13	13	10	12	10	7	10
Food Science	28	35	22	21	25	22	23	25
Forestry and Wood Utilization	73	73	90	135	129	117	104	144
Landscape Architecture	63	65	88	87	80	101	120	117
Park Administration	-	-	5	12	32	41	55	45
Plant and Soil Sciences	28	29	26	34	29	31	39	44
*Plant Pathology	-	-	-	-	-	-	3	1
Restaurant and Hotel Administration	26	35	58	82	129	160	166	181
Veterinary and Animal Sciences	43	53	52	66	75	97	105	120
Wildlife and Fisheries Biology	55	78	98	130	151	178	193	181
TOTALS	345	395	487	620	705	805	871	922

*Entomology and Plant Pathology combined from 1958 through 1967.

PER CENT OF INCREASE 1963 TO 1970: 168%

3. Freshmen and Transfer Students Enrolled - Fall 1970 (Undergraduates)

Department	Class of 1974 No. Enrolled*	Transfer Students	Total New Students
Agricultural and Food Economics	7	10	17
Food and Agricultural Engineering	3	0	3
Entomology	2	1	3
Food Science and Technology	3	1	4
Forestry and Wildlife Management			
Fisheries Biology	9	5	14
Forestry	35	17	52
Wildlife Biology	29	14	43
Wood Technology	3	9	12
Hotel and Restaurant Administration	27	21	48
Landscape Architecture			
Environmental Design	9	14	23
Park Administration	8	6	14
Plant and Soil Sciences	7	11	18
Plant Pathology	0	1	1
Veterinary and Animal Sciences	37	8	45
TOTALS	179	118	297

*Includes swing shift freshmen.

4. Source of Transfer Students - 1970 (4-year)

		No. of Students
Massachusetts Community Colleges		40
Berkshire Community College	3	
Bristol Community College	3	
Cape Cod Community College	3	
Greenfield Community College	5	
Holyoke Community College	7	
Massachusetts Bay Community College	4	
Massasoit Community College	4	
Mt. Wachusett Community College	1	
Northern Essex Community College	4	
North Shore Community College	3	
Quinsigamond Community College	2	
Springfield Technical Community College	1	
U. Mass. Boston		4
Stockbridge School of Agriculture		49
Paul Smith's School (New York)		10
Miscellaneous Colleges (in and out of state)		15
TOTAL		118

5. Applications for Entrance - September 1970 (STOCKBRIDGE SCHOOL - Class of 1972)

Major	No. Received	No. Accepted	No. Rejected	No. Cancellations	No. Enrolled
Agricultural Business Management	19	18	1	9	9
Animal Science	95	66	29	24	42
Arboriculture and Park Management	122	60	62	16	44
Environmental Technology	41	27	14	5	22
Floriculture	36	26	10	3	23
Food Distribution	13	10	3	1	9
Food Processing Technology	12	9	3	4	5
Fruit and Vegetable Crops	17	16	1	6	10
Hotel and Restaurant Administration	134	86	48	26	60
Laboratory Animal Management	17	11	6	2	9
Landscape Operations	52	35	17	9	26
Turf Management	101	73	28	19	54
Wood Utilization	25	21	4	6	15
TOTALS	684	458	226	130	328

6. STOCKBRIDGE SCHOOL ENROLLMENTS BY MAJOR (FALL) - 1963-1970

Major	1963	1964	1965	1966	1967	1968	1969	1970
Agricultural Business Management	-	-	-	5	16	21	21	20
Animal Science	70	73	69	67	111	101	89	70
Arboriculture and Park Management	98	100	100	100	99	112	116	94
Dairy Technology	26	26	21	16	21	14	9	-
Environmental Technology	-	-	-	-	-	-	-	23
Floriculture	33	33	34	33	43	39	34	32
Food Distribution	15	17	23	26	29	31	23	16
Food Distribution - 1 year	6	6	6	4	-	-	-	-
Food Processing Technology	-	-	-	-	-	-	-	7
Fruit and Vegetable Crops	11	11	15	18	15	16	15	18
Hotel, Restaurant and Travel Adm.	-	-	-	-	-	-	129	129
Laboratory Animal Management	-	-	-	6	*	15	15	24
Landscape Operations	43	44	48	48	51	48	51	52
Lumber and Building Materials Business Management	-	-	-	-	7	11	13	4
Poultry Science	8	8	2	-	-	-	-	-
Turf Management	82	85	84	85	70	69	88	92
Wood Utilization	20	20	28	39	34	24	22	27
TOTALS	473	486	500	532	586	601	625	608

*Included in Animal Science.

7. Number of Graduate Students and Post-Doctoral Fellows

Department	M.S.	PH.D.	Degrees Awarded M.S.	Degrees Awarded PH.D.	Post-Doctoral Fellows
Agricultural and Food Economics	21	8	10	-	-
Food and Agricultural Engineering	5	15	3	7	-
Cranberry Station	-	-	-	-	1
Entomology	12	5	5	1	-
Environmental Sciences	-	-	-	-	2
Food Science and Technology	18	32	3	10	-
Forestry and Wildlife Management	56	20	19	4	2
Landscape Architecture and Regional Planning	57	-	6	-	-
Plant and Soil Sciences	17	19	7	5	-
Plant Pathology	6	6	1	-	-
Veterinary and Animal Sciences	14	17	4	1	1
TOTALS	206	122	58	28	6

Number of Degrees Awarded

Degrees	September 1968 to June 1969	September 1969 to June 1970	September 1970 to June 1971
Bachelor of Science	194	167	235
Master of Science	56	55	58
Doctor of Philosophy	14	18	28
Stockbridge School	249	240	218
TOTALS	513	480	539

8. GRADUATE ENROLLMENTS BY DEPARTMENTS (FALL) - 1963-1970

Major	1963	1964	1965	1966	1967	1968	1969	1970
Agricultural and Food Economics	30	25	27	29	18	35	37	29
Agricultural Engineering	12	16	18	13	10	15	19	19
*Entomology	14	20	24	24	35	25	22	17
Food Science	21	35	46	42	51	49	42	50
Forestry and Wildlife Management	12	44	46	46	45	45	85	76
Landscape Architecture	4	15	19	30	40	42	37	57
Plant and Soil Sciences	8	13	19	19	29	41	36	36
*Plant Pathology	-	-	-	-	-	15	8	11
Veterinary and Animal Sciences	16	18	29	29	28	31	29	33
TOTALS	117	186	228	232	256	296	315	328

*Entomology and Plant Pathology combined from 1958 through 1967

PER CENT OF INCREASE 1963 TO 1970: 180%

C. ACADEMIC HONORS - CLASS OF 1971

1. Undergraduates

Summa Cum Laude

Robert Arthur Gentry - Hotel, Restaurant and Travel Administration

Magna Cum Laude

Raymond Paul Guries - Forestry
Brian Reed Mrazik - Forestry
William W. Remaly, Jr. - Hotel, Restaurant and Travel Administration
Thomas L. Stoffle, Jr. - Forestry

Cum Laude

Twenty-seven students were graduated with academic distinction.

American Society of Animal Science Scholarship Awards

Students must rank scholastically among top 10% of their class within the College of Agriculture:

Alfred Blackmer
Kathleen Brookman
Robert Dyer
Janis Higgins
Margo McGowan
Linda Ramsey
Beverly Szymanski

2. Stockbridge School

With Honors

Donna M. Tolper - Laboratory Animal Management
Robert P. Wellington - Fruit and Vegetable Crops
Robert J. McBridge, Jr. - Arboriculture and Park Management
Kenneth C. White - Agricultural Business Management
Bruno F. Terrasi - Landscape Operations
James P. Radziewicz - Hotel, Restaurant and Travel Administration
William R. Roberts - Agricultural Business Management
John A. Blenkhorn - Landscape Operations

Lear Honorary Scholastic Society

(3.4 or Higher Cumulative Average Required)

Janet Houghton
Daniel Lambert
Darlene Sandman
Donna Tolper
Alain Vulliet

D. STUDENT ACCOMPLISHMENTS AND RECOGNITION

Department of Agricultural and Food Economics

John G. Brinkman, UM '73 - $1,000 National Food Brokers Foundation Association Scholarship and $300 Borden Agricultural Scholarship.

Daniel J. Dudek, UM '73 - $300 New York State Farmers Scholarship.

Sally Leslie, UM '73 - $1500 Codding Scholarship.

Steven Mederios, S '72 - $1500 Codding Scholarship.

Gary A. Nickerson, UM '73 - $100 New York State Farmers Scholarship.

Daniel J. Dudek, '73 - Earned 4.0 quality point average during the fall semester.

Twelve undergraduates ended the fall semester with quality point averages of 3.0 or over.

Graduate Students

Roger King and Dwight Steen - Nominated for membership in Phi Kappa Ph

Department of Food and Agricultural Engineering

Graduate Students

John E. Manson, Ph.D. candidate, served as consultant to Beech-Nut Inc. on thermal processing problems.

J. Manson, K. Purohit, R. Graves, E. Balmaceda and A. Husain authored and coauthored several papers presented at national meetings. Several of these papers will be published as part of proceedings and/or journal articles in the forthcoming year.

Phillip Maramma, Wood Technology, as a part of AE 261 Food Marketing Systems, developed an idea proposed to him by C. A. Johnson for insertion of fiberglass cloth into glued joints of wood. His preliminary investigations bear out the distinct possibility of the reinforcing of wood and tension splices with high-strength fibers of glass. This could be of value in the construction of trusses, truss beams, arches and similar structural components.

Department of Food Science and Technology

Thomas C. Bibeau, UM '71 - Awarded scholarship from Northeast Section, Institute of Food Technologists.

Clifford P. Starr, UM '73 - Awarded scholarships from Northeast Section, Institute of Food Technologists and the Ralston-Purina Compar

Noel E. Anderson, Kent B. Issenberg, Jeffrey H. Main, Peter L. Noonan and Miguel D. Zweig, UM '74 - Awarded General Foods Fund, Inc., Freshman Scholarship.

Noel E. Anderson, UM '74 - Awarded Institute of Food Technologists Freshman Scholarship.

Graduate Students

Rodney J. Croteau, Awarded postdoctoral fellowship, Oregon State University.

Shawky L. Dagher, Awarded postdoctoral fellowship, Michigan State University

Paul R. LeTellier, Recipient of an Honored Student Award from American Oil Chemists' Society, September 1971.

Ronald L. Melnick, Awarded postdoctoral fellowship University of California (Berkeley).

Twenty graduate students were elected to national honorary societies including: Phi Kappa Phi - 4, Phi Tau Sigma - 4, Sigma Xi - 12.

Department of Forestry and Wildlife Management

Thomas L. Stoffle, UM '71 - was elected to Phi Kappa Phi, superior scholarship; 22 were selected for Xi Sigma Pi, honorary forestry society; and 5 in wood technology received outstanding-student awards from the Forest Products Research Society.

Daniel J. Buckley, UM '71 - Awarded $500 Rich Award scholarship and certificate of recognition.

Nancy Ferraro, UM '74 - Awarded $250 scholarship for beginning students in wood technology or wood use at a New England school and a certificate of recognition.

Department of Hotel, Restaurant and Travel Administration

John Hogen, UM '7 - Served as vice-president of Student Senate. Three other students are senators.

Seven Hotel and Restaurant Merchandising students participated in a special promotion demonstration in cooperation with the Statler-Hilton Hotel in Boston. During the 3-day program the students experienced actual business situations and performed in the role of hotel sales personnel.

Department of Landscape Architecture and Regional Planning

Robert Haehle, UM '71 - Environmental Design Major - granted one of five Longwood Garden Fellowships out of some 20 finalists.

Theses and terminal projects were completed as follows:

Stephen Drake, UM '71 - "Environmental Quality Legislation and the Landscape Architect:" A Survey of Massachusetts General Laws.

Stephen McBride, UM '71 - "The Educational Implications of School Site Planning."

Peter Olin, UM '71 - "Housing and Transportation at the University of Massachusetts."

Ten students attended meetings at Purdue (fall) and Louisiana (spring) of the Student Alliance of Landscape Architects. They financed their own trips and took part in programs concerned with landscape architectural education and its relation to current social problems.

Graduate Students

Lloyd Kirley, (M.L.A.) - Is doing a special study for a Holyoke Bank on Financing Environmental Rehabilitation in Slum Areas.

Department of Plant and Soil Sciences

Eleanor Snay, UM '71 - Awarded University of Massachusetts Fellowship for graduate study and New York Farmers Scholarship of $300.

Jayne Timmerman, UM '72 - Awarded scholarship from the Massachusetts Federation of Garden Clubs.

Jean M. Fritchman, UM '74 - Awarded New York Farmers Scholarship.

Robert P. Wellington, S '71 (Fruit and Vegetable) - Awarded New York Farmers Scholarship of $100.

Karen R. Gutowski, S '72 (Turf) - Awarded New York Farmers Scholarship

Wilham F. Nemergut, S '72 (Turf) - Awarded New York Farmers Scholarshi

Jean E. Valenti, S '72 (Floriculture) - Awarded New York Farmers Scholarship.

Charles Adams, S '71 (Turf) - Awarded Golf Course Superintendants Association of America Scholarship of $300.

Mark Loper, S '71 (Turf) - Awarded Golf Course Superintendants Association of America Scholarship of $300.

David Quinn, S '71 (Turf) - Awarded Golf Course Superintendants Association of America Scholarship of $300.

Kenneth Anderson, S '71 (Turf) - Awarded Lawrence S. Dickinson Memorial Scholarship.

Graduate Students

Michael Dirr - Awarded NDEA Fellowship.

The following undergraduate and graduate students presented papers (or were co-authors) at the Northeast Regional Meetings of the American Society for Horticultural Science, University of New Hampshire, January 29 and 30, 1971: R. P. Creencia, M. A. Dirr, H. A. Mills, M. R. Shipway (2), H. C. Volante, B.S. '71.

The following graduate students presented papers (or were co-authors) at the Annual Meeting of the American Society of Plant Physiologists, Indiana University, August 23-27, 1971: Mrs. B. Mioduchowska, M. A. Noor, Y. T. Pan, P. D. Reid.

The following graduate students delivered talks within the Plant and Soil Sciences Seminar Series, 1970-1971: Lawrence Goldstein, Harry A. Mills, Y. T. Pan, Rabindranath Patnaik, Mrs. Maria S. Sapuncakis, Michael Shipway.

Department of Plant Pathology

Graduate Students

Tom Woods was awarded an NSF traineeship ($2600).

Hasan Ali Khan presented a paper at the Northeastern Division, American Phytopathological Society meetings at Syracuse in November.

Department of Veterinary and Animal Sciences

American Society of Animal Science Scholarship Awards (students must rank scholastically among top 10% of their class within the College of Agriculture):

Juniors:

Janet Barge	Joanna Maher
Carol Collyer	Richard Wilson

Sophomores:

Carey Bare	Robert Dunn
Teresa Bartiromo	Carolyn Jensen
Katharin Cavanaugh	Paul Moody
Elizabeth Donohue	Johanna Shumway

Eleven members of the Class of '71 have been accepted to professional and graduate schools as follows: Medical School, 1; Veterinary Medicine, 6; and Graduate School,4.

Stockbridge Freshmen with 4.0 cumulative average:
Roberta Fosberry,Jo-Ann Pacheco, Bruce Rumery.

Sixteen Stockbridge graduates have been accepted for transfer into the University.

V. STUDENT-FACULTY INTERACTION

A. JOINT COMMITTEES

College Level

1. Committee: Educational Policies.

   Composition: 14 faculty and 4 students, all with vote.

   Charge: Evaluate and recommend action regarding new or revised courses and programs for the graduate and undergraduate curricula.

2. Committee: Stockbridge School Advisory.

   Composition: 14 faculty and 2 students, all with vote.

   Charge: Evaluate and recommend action regarding new or revised courses and programs for the two-year curricula.

Departmental Level

Agricultural and Food Economics

1. Committee: Employment Opportunities.

   Composition: 4 faculty, 2 graduate, 1 undergraduate, 1 Stockbridge student, all with vote.

   Charge: Provide employment opportunities to students and advise prospective employers of AFE programs.

2. Committee: Faculty-Staff Relations Sub-Committee.

   Composition: 1 faculty, 2 graduate students, all with vote.

   Charge: Develop guidelines describing department's expectations of graduate students, graduate student responsibilities and privileges.

3. Committee: Faculty-Staff Relations.

   Composition: 3 faculty, 3 nonprofessionals, 1 graduate student, all with vote.

   Charge: Develop recommended policies for improved relationships at all levels.

4. Committee: Department Graduate Curriculum.

   Composition: 3 faculty, 1 graduate student, all with vote.

   Charge: Review graduate curriculum and recommend changes where needed.

Entomology

No established committees at present time, however a student-faculty committee of the whole recently completed an extensive curriculum revision.

Food and Agricultural Engineering

1. Committee: Graduate Student-Faculty relations.

   Composition: 2 faculty, 2 students, all with vote.

   Charge: Foster better professional and personal relations through discussion of appropriate topics.

Food Science and Technology

1. Committee: Graduate Studies.

   Composition: 3 faculty, 2 graduate students, all with vote.

   Charge: Continual review of department graduate curriculum and courses.

2. Committee: Graduate Student-Faculty.

   Composition: 2 faculty and 2 students, all with vote.

   Charge: Maintain effective communication and liason between graduate students and department and its faculty.

3. Committee: Departmental Safety.

   Composition: 4 faculty and 1 student, all with vote.

   Charge: Continual surveillance and review of potential hazards in building and cold storage area.

4. Committee: Undergraduate Student-Faculty Curriculum.

   Composition: 2 faculty and 2 students, all with vote.

   Charge: Review curriculum and courses.

5. Committee: Food Science and Food Engineering Interdepartmental Liason.

Composition: 2 faculty and 2 graduate students from each department, all with vote.

Charge: Consider areas of mutual interest and foster closer Cooperation.

6. Department Faculty Meetings are regularly attended by two each undergraduate and graduate student representatives.

Forestry and Wildlife Management

1. Committee: Student-Faculty INTERCOMS established in Forestry and Wood Technology sections.

   Composition: 4 faculty and 6 elected student representatives in each, all with vote.

   Charge: Review curricula, courses, and programs in general.

2. Committee: ad hoc Curriculum.

   Composition: 5 faculty, 7 undergraduates, and 2 graduate students, all with vote.

   Charge: Review and revise curricula.

3. Committee: ad hoc Search Committee for New Faculty.

   Compostion: faculty plus 3 graduate students.

   Charge: Interview candidates for department position.

4. Committee: Departmental Public Seminar.

   Composition: Graduate students only.

   Charge: Organize and conduct seminars or colloquia on natural resource topics.

Hotel and Restaurant Administration

1. Committee: Student-Faculty Curriculum Review.

   Composition: 3 faculty and 4 students, all with vote.

   Charge: Review curriculum and specific departmental degree requirements.

Landscape Architecture

1. Committee: Graduate Curriculum.

   Composition: 4 faculty and 2 students, all with vote.

   Charge: Review curriculum, refine advising system.

2. Committee: Undergraduate Curriculum.

   Composition: 3 faculty and 2 students with vote.

   Charge: Same as graduate committee.

Plant and Soil Sciences

Letter and questionnaire was sent to 185 students in Oct. '69 to sample interest in establishment of student-faculty affairs committees. Apparently students satisfied as very little interest in such committees. Graduate students have elected two spokesmen who present their ideas and proposals to the faculty.

Plant Pathology

This is a small department; students and faculty act as a committee of the whole for most matters.

Veterinary and Animal Science

1. Committee: Student-Faculty Affairs.

   Composition: 6 faculty and 6 students, all with vote.

   Charge: Deals with any problems of mutual concern: primarily extra-curricular affairs.

2. Committee: Curriculum.

   Composition: 7 faculty and 3 students, all with vote.

   Charge: Evaluate and revise curriculum.

B. SPECIAL ACTIVITIES

1. Students and faculty in Wood Science and Technology sponsored a student-industry banquet in April at the Campus Center. This annual banquet is held to promote closer relationships between students and representatives of the wood products industry. James R. Turnbull, executive vice-president, National Forest Products Association, Washington, D. C. was guest speaker.

2. Field trips to New York, Chicago and Boston were arranged for members of the Innkeepers Club, a student group in the Department of Hotel, Restaurant and Travel Administration. Club members helped to man booths at shows and expositions in the three cities. Terry Grinnan acted as faculty club advisor and arranged the trips.

3. The Faculty-Staff-Student Relations Committee in the Department of Agricultural and Food Economics developed and issued a weekly newsletter during the year. The newsletter is distributed to all students, departmental staff members and administrators.

VI. NEW COURSES APPROVED

Agricultural and Food Economics

A & F Ec	177	Basic Biometry (E)
A & F Ec	376/676	Marine Resource Development Economics

Entomology

Ent	822	Insect Microbiology and Pathology

Food and Agricultural Engineering

F A E	740	Physical Properties of Biological Materials

Forestry and Wildlife Management

For	239/539	Forest Resources of North America

Hotel, Restaurant and Travel Administration

H R T A	203 (I), 204 (I)	Guest Lecture Series
H R T A	302	Wines and Spirits in Food Service
H R T A	325/625	Travel and Tourism

Landscape Architecture and Regional Planning

Env Des	140	Visual Awareness of the Physical Environment

Plant and Soil Sciences

Pl Soil	115	The Plant Environment and Crop Production

Veterinary and Animal Sciences

An Sci	219/519	Introductory Animal Physiology

COURSE MODIFICATIONS

A F E	110	World Food and Natural Resources (D)
(Addition of core designation)		
Ent	803	Insect Embryology
Fd Sci	384/684	Sensory Evaluation Methods
Fd Sci	850	Colorimetry and Appearance
Plant Path	378/678	Nematology

VII. FACULTY

A. SUMMARY OF FACULTY PUBLICATIONS

Department	Scientific and Technical Publications	Extension Publications	Books	Book Reviews
Agricultural and Food Economics	28	25	-	3
Food and Agricultural Engineering	10	11	-	-
Cranberry Station	16	6	4	2
Entomology	14	-	-	-
Environmental Sciences	17	2	-	-
Food Science	45	1	-	-
Forestry and Wildlife Management	32	6	1	1
Hotel, Restaurant and Travel Administration	2	1	2	-
Landscape Architecture	2	1	-	-
Plant and Soil Sciences	28	15	-	2
Plant Pathology	13	16	1	-
Shade Tree Laboratories	6	1	-	-
Suburban Experiment Station	61	16	-	1
Veterinary and Animal Sciences	29	14	-	1
TOTALS	303	115	8	10

B. FACULTY AWARDS, CITATIONS AND PROFESSIONAL RECOGNITION

Department of Agricultural and Food Economics

Callahan, James W.
Appointed Acting Department Head, July 1, 1970

Christensen, Robert L.
Listed in American Men of Science

Jarvesoo, Elmar
"Flower Production, Consumption and Trade in the U.S.A., "Paper distributed at the Second Symposium on Horticultural Economics, Commission for Horticultural Economics, International Society for Horticultural Science, Montpellier, France, September 13-19, 1970
"The U. S. as an Import Market for Floricultural Products." Ibid

Marion, Donald R.
Invitational paper "Distribution Systems for the Poor - Progress and Prospects," National Food Distribution Research Society annual conference, October, 1970, St. Louis, Mo.
Invitational paper "Operating Stores in Problem Areas," 1971 Annual Convention of the National Association of Retail Grocers of the U.S., Philadelphia, June, 1971

Storey, David A.
Chairman of session at 15th Atlantic Fisheries Technological Conference, Amherst, October 5-6, 1970. Also delivered a paper on "Relationships between Household Characteristics and Seafood Purchasing Patterns."

Wyckoff, J. B.
Elected the first Chairman of the Northeastern Agricultural Economics Council
Appointed Co-Chairman of the National Electronic Data Processing Committee for Rural Development

Invited Papers

Annual Conference of Western Agricultural Economics Association, Tucson, Ariz., July 21, 1970, "Discussion: 'A Case Study of Field Burning in the Willamette Valley"
American Agricultural Economics Association Annual Meeting, Columbia, Mo., August 7-12, "Discussion: 'Economic and Political Future for Public Programs in Rural America'"
American Water Resources Association Annual Meeting, Las Vegas, Nev., October 26-30, "Measuring Intangible Benefits--Some Needed Research"
Northeastern Regional Resources Research Committee, November 4-5, Washington, D.C., "Evaluation and Critique of Current Natural Resource Policies--The Viewpoint of a Resource Economist"
Great Plains Regional Resource Economics Committee, "The Application of Computer Technology in Rural Development"

Cranberry Station

Devlin, R. A.
Paper, "Oxidation Enzymes and Pathways of Hexose and Triose Metabolism in Chlorella," was chosen for inclusion in the book Selected Papers in Phycology.

Environmental Sciences

Coler, Robert A.
Research Fellow, Tunghai University, E. China; and principal speaker at Colloquim, Ibid, "Pollution: Problems & Priorities," 1970

Gunner, Haim B.
Invitational lecturer, "First National Biological Congress Man and Environment" November 6-10, 1970
Invitational lecturer, Macdonald College, McGill University, March 22-25, 1971, "Distinguished Microbiologist Series." A series of four lectures on "New Aspects of Ecosystem Stress"

Litsky, Warren
Appointed member of Massachusetts Executive-Legislative Commission on Solid Waste Management Programs
Elected Fellow of the American Academy for Microbiology, May 1970
Presented invited paper at the Conference on the Microbiology of Semi-preserved Foods, Prague, Czechosolvakia, October 1970
Appointed special consultant to Federal Water Quality Administration, U. S. Department of Interior
Appointed special consultant to Bureau of Hospital Facilities, U.S. Department Health, Education and Welfare
Invited to participate on the Panel of Research Activities at the National Conference on Food Protection, Denver, Colo., April,1971
Invited speaker, roundtable on "Potential Control of Bacterial Aerosols Generated in the Dental Operatory at the American Society for Microbiology, 1971
Moderator, session on Water Pollution Ecology at the American Society for Microbiology, annual meeting, 1971

Walker, Robert W.
Chairman, Symposium: Biochemistry of Hydrocarbon Degradation - Fall 1970 meeting - Chicago. American Oil Chemists Society and International Society for Fat Research

Department of Food and Agricultural Engineering

Fletcher, S.W.
Moderator, section of a series of Food Engineering Forums, "The Role of the Food Industry in Maintaining Environmental Quality," Dairy and Food Industries Supply Association and the American Society of Agricultural Engineers, Houston, Tex., November 1970

Whitney, L.F.
Presented an overview of "Subsurface Irrigation in the Northeast" at the National Irrigation Symposium held in Lincoln, Neb., November, 1970.

Clayton, J.T.
Awarded a North Atlantic Treaty Organization Senior Fellowship in Science at University of Reading, Berks, England. Study of agricultural and food production structures; physical properties of foodstuffs, January - June, 1971

Invitational Papers

Chen, C.S., "Shrinkage in Dehydration of Grapes," American Society of Agricultural Engineers, Pullman, Wash., June, 1971

Chen, C.S. and J. T. Clayton, "Equilibrium Curves for Biological Materials, "American Society of Agricultural Engineers, July, 1970

Fletcher, S.W., "Principles of Food Packaging," 19th Annual Food and Dairy Engineering Conference, East Lansing, Mich., January, 1971

_____, "Experiences With a Graduate Food Engineering Program," American Society of Engineering Education, Annapolis, Md., June,1971

_____, "Damage to Canned Pears During Simulated Handling Procedures," American Society of Agricultural Engineers, Pullman,Wash., June, 1971

Pira, E.S., "New Concept for a Subsurface Irrigation Pipeline," North Atlantic Region, American Society of Agricultural Engineers, Newark, Del., August, 1970

Whitney, L.F., "Flow Visualization of a Modeled Fluidization Drying Process, "American Society of Agricultural Engineers, Minneapolis, Minn., July, 1970

Department of Food Science and Technology

Clydesdale, F.M.
Invited with Dr. F.J. Francis, by The Center for Professional Advancement to present a two-day short course on "The Color Measurement of Foods," at Fairleigh Dickinson University, Madison, N.J., July 20-21, 1970
Invited to serve as vice-chairman for technical session on Plant Biochemistry at annual meeting of Institute of Food Technologists in New York, N.Y., May 23-26, 1971

Esselen. W. B.

Awarded Fulbright-Hays Lectureship for Trinidad and Tobago for the academic year 1971-72 to participate in development of food technology at University of the West Indies

Invited to serve as Senior Consultant and Head, Education Division of Caribbean-American Research Institute

Invited lecturer on "Food Quality Control" at University of the West Indies, St. Augustine, Trinidad, July, 1970

Fagerson, I.S.

Presented invited paper on "Polycyclic Aromatic Hydrocarbons in Heat Treated Foods" at Third International Congress of Food Science and Technology, Washington, D.C., August 11, 1970 (with G. Halaby)

Francis, F. J.

Presented two invited papers: (1) "Colorimetry of Meat Products" at meeting of American Meat Science Association; and (2) "Relationship of Color to Food Acceptance" at Third International Congress of Food Science and Technology, Washington, D.C., August, 1970

Invited, with Dr. F. M. Clydesdale, by Center for Professional Advancement to present a two-day short course on "The Color Measurement of Foods" at Fairleigh Dickinson University, Madison, N.J., July 20-21, 1970

Hayes, K. M.

Elected chairman, Board of Registration of Sanitarians, Commonwealth of Massachusetts

Invited lecturer on "Handling, Storage, Packaging and Marketing Fresh Fruits and Vegetables" at University of the West Indies, St. Augustine, Trinidad, July, 1970

Hultin, H. O.

Invited to participate in first Institute of Food Technologists short course, New York, May 1971 on "Fundamentals of Proteins in Foods" and to present lectures on "Chemistry of Proteins."

Asked to organize symposium on "Biochemical Control Systems in Food Tissues" for annual meeting Institute of Food Technologists, New York, May 1971; presented paper at symposium on "Enzymic Activity and Subcellular Localization"

Levin, R. E.

Presented invited paper, "An Obligately Psychrophilic Phagehost System," at annual meeting of American Society for Microbiology

Mulvaney, T. R.

Elected fellow, American Institute of Chemists

Nawar, W.W.
Selected as an Institute of Food Technologists Scientific Lecturer for 1971-72. Presented four invited papers: (1) "Variables Affecting Headspace Composition of Aroma Components," American Chemical Society Meeting, Chicago, September 1970, (2) "The Flavor of Olive Oil," World Congress on Fat Research, Chicago, October 1970, (3) "Effect of Irradiation of Fats," American Chemical Society, Los Angeles, March 1971, and (4) Seminar talk at the Department of Nutrition and Food Science, Massachusetts Institute of Technology, February 1971

Potter, F.E.
Presented two invitational papers at Dairy Industry Conference, Ohio State University, February 1971: (1) "Innovation in Dairy-Type Foods," and (2) "A New Look at Ice Cream Formulations and Processes"

Sawyer, F.M.
Appointed Institute of Food Technologists Scientific Lecturer for third year. Presented invited lectures on "Practical Aspects of Sensory Evaluation of Foods" at: (1) Nutmeg Section, Darien, Conn., (2) Downeast Section, Portland, Me., and (3) Bluegrass Section, Louisville, Ky.
Presented invited lecture "Low Temperature Food Preservation" in short course sponsored by The Center for Professional Advancement at Fairleigh Dickinson University, Madison, N.J., July 1970
Appointed Institute of Food Technologists Liaison Representative to Sociedade Brasileira De Ciencia E Technologia De Alimentos

Stumbo, C.R.
Presented invited papers on the "Mathematical Evaluation of Gaseous and Dry Heat Treatments for Air and Surface Disinfection" at National Specialty Conference on Disinfection, University of Massachusetts, July 1970

Department of Forestry and Wildlife Management

Carlozzi, Carl A.
"Urbanization: Some Thoughts on Its Challenge to Ecologists," Annual Meeting of American Association for Advancement of Science, 1970

Gatslick, Harold B.
Voted member of Board of Trustees, National Academy of Code Administration (building regulations and enforcement), Chicago, Ill., January 1971

Noyes, John H.
Received award for Distinguished Service to the Forestry Profession, New England Section Society of American Foresters (SAF), March, 1971

Noyes, John H.
Invitational papers: "Silviculture's Role in the Environmental Crisis," Annual Meeting, New England Section SAF; "Overcoming Reluctance of Forest Landowners Toward Timber Harvesting," Annual Meeting, Northeast Lumber Manufacturers Association

Rice, William W.
Invitational paper, "Regional Lumber Drying Problems," National Meeting, Forest Products Research Society

Wilson, Brayton F.
Invitational paper, "Modeling Cambial Activity" joint meeting Botanical Society of America and Canadian Botanical Society

Hotel, Restaurant and Travel Administration

Eshbach, Charles E.
Invitational paper, "Needs for Research in the Food Service Industry," 23rd Conference of the Society for the Advancement of Food Service Research, Chicago, Ill., March 1971

Wrisley, Albert L.
Invitational paper, "Forecasting for Food Service Operation," Science of Survival '70, Washington, D.C.

Department of Landscape Architecture and Regional Planning

Fabos, Julius Gy.
Awarded Bradford Williams Medal for most outstanding article in Landscape Architecture by American Society of Landscape Architects

Hamilton, Tom S.
Asked to prepare the plant materials section of the Landscape Architects' Registration Exam for State of Connecticut

Scheffey, Andrew
Chairman of Governors' Commission on Open Space and Outdoor Recreation; and responsibility for preparing the Commission's study report on the status of land use planning in the Commonwealth

Greenbie, Barrie B.
Invitational papers, "Some Implications for Urban Design from Studies of Animal Behavior," Environmental Design Research Association meetings, October 28-30, 1970
"Some Implications for Urban Planning in the Findings of Comparative Ethology," American Institute of Planners Conference, October 17-19, 1970

Sears, David
Invitational paper, "New York State Regional Housing Model," American Institute of Planners Conference, October 17-19, 1970

Department of Plant and Soil Sciences

Barker, A.V.
Elected Fellow of the American Institute of Chemists

Bramlage, W.J.
Received "Outstanding Professor, 1971," award of the Stockbridge School of Agriculture
Invitational paper, "Control of Ripening by Storage in Controlled Atmospheres," American Chemical Society, Los Angeles, Calif., April 1-2, 1971

Maynard, D.N.
Presented invitational seminar, "Ammonium Nutrition of Vegetable Crops," University of Guelph, Guelph, Ontario, Canada, April 29, 1971

Troll, J.
Invitational paper, "Education Prerequisite for Future Superintendents," Royal Canadian Golf Course Superintendents Association Conference, March, 1971

Department of Plant Pathology

Mount, M.S.
Invited papers: Symposium on Ecology of the Leaf Surface, University of Newcastle, Tyne, England; and at symposium on Modification of Resistance to Pathogens at British Association for the Advancement of Science meetings, Durham, England, August 1970

Rohde, R. A.
Chairman, colloquium on Host Resistance, 2nd International Congress of Parasitology, Washington, D.C., September, 1970
Recipient, Alumni Achievement Award in the Sciences, Drew University, June 1971

Shade Tree Laboratories

Holmes, Francis W.
Recipient, Fulbright travel grant in Europe, August 1970-June 1971, with headquarters at Phytopathologisch Laboratorium, Baarn, Nederland. Research and educational activities included series of 8 science lectures in Jugoslavia, May-June, 1971

Suburban Experiment Station

Craker, Lyle E., William A. Feder, William J. Manning, judges at the Massachusetts State Science Fair held April 16-18, 1971 at Massachusetts Institute of Technology. Co-sponsored by The Boston Globe

Faddoul, George P.
Listed at the National Library of Medicine in a 'Roster of Authorities in Specialized Subtopics in Toxicology'

Feder, William A.
Invitational paper, American Chemical Society Symposium 'Effects of Air Pollution on Agriculture,' Los Angeles, Calif., March 1971

Manning, William J.
Received National Science Foundation Post-Doctorate Award from Mountain Lake Biological Station, University of Virginia
Invitational paper on ecology of Rhizoctonia salani at Third Eastern Conference on Ecology of Soil-Borne Microorganisms at Athens, Georgia

Naegele, John A.
Invited to organize and prepare a Symposium on Air Pollution and Agriculture for the American Chemical Society at the Annual Meeting of ACS in Los Angeles, March 1971
Invited as panelist, College and University Conference and Exposition, "The Ecological Responsibilities of Colleges: Curricular and Architectural Implications," Atlantic City, N.J., March 1971

Department of Veterinary and Animal Sciences

Black, D.L.
Invited participant, Conference on the Regulation of Mammalian Reproduction, National Institutes of Health (NIH), Bethesda, Md. Member, NIH Site Visitation Team, University of Missouri

Gaunt, S.N.
Invitational paper, "Milk Composition Research," 18th International Dairy Congress, Sydney, Australia
Elected Member, International Platform Association

Sevoian, M.
Scientific visitations, governments of Bulgaria, Hungary and Czechoslovakia (Avian Leukosis)
Participant, World Poultry Congress, Madrid, Spain and Herpes Virus Symposium, Cambridge, England

Smith, R. E.
Invitational papers: "Aborted Fetuses: A Diagnostic Problem," 9th Annual Convention of the Ontario Veterinary Association, Toronto, Canada; "Fetal Disease," 63rd Annual Conference for Veterinarians, New York State Veterinary College, Cornell University, Ithaca,N.Y.

Smyser, C.
Certified Specialist Microbiologist, National Registry of Microbiologists

Snoeyenbos, G.H.
Awarded Distinguished Service Award, American Association Avian Pathologists.
Invitational paper, "Salmonella Growth Curves as Related to Isolation Methodology," American Veterinary Medical Association Annual Meeting
External Examiner, Ph.D. candidate, University of Saskatoon, Canada

C. OFFICES AND COMMITTEE MEMBERSHIPS IN PROFESSIONAL SOCIETIES

Department of Agricultural and Food Economics

Christensen, Robert L.
- Chairman, Northeast Regional Farm Management Committee.
- Member, Undergraduate Teaching Awards Committee of American Agricultural Economics Association.

Crossmon, Bradford D.
- Member, Northeast Regional Farm Management Extension Committee.

Engel, N. Eugene
- Secretary, New England Federal Milk Orders Committee.

Foster, John H.
- Member, Program Committee, Association of Directors of U.S. University programs in International Agriculture.

Fuller, Earl I.
- Member, Awards Committee for Published Research of the American Agricultural Economics Association.
- Member, National Committee on EDP Applications In Commercial Agriculture.

Jarvesoo, Elmar
- U.S.A. Correspondent for the Commission for Horticultural Economics of the International Society for Horticultural Science.

Marion, Donald R.
- Member, Planning Committee for National Conference on Cooperatives for Low-Income People.

Spindler, Herbert G.
- Member, International Economics Association.
- Member, National Accounting Association and Director of Educational Services for the Massachusetts Pioneer Valley Chapter, N.A.A.

Wyckoff, J. B.
- Vice-Chairman, Northeastern Public Policy Committee.
- Secretary, Northeastern Regional Resources Research Committee.
- Chairman, Executive Committee, New England Agricultural Economics Council.
- Member, Sub-Committee of Northeastern Regional Resources Research Committee on Outdoor Recreation.
- Co-Chairman, Science and Education, USDA National Committee on the Use of Electronic Data Processing in Rural Development.
- Elected Representative for Research, Northeast Region, National Public Policy Education Committee.
- Member, Program Committee, National Public Policy Education Committee.
- Member, Extension Awards Committee, American Agricultural Economics Association.

Cranberry Station

Zuckerman, Bert M.
Member, Translation and Exchange Committee, Society of Nemotologists.

Department of Entomology

Becker, W. B.
Vice Chairman, Northeast Forest Pest Council.
Member, Ornamental Insect Workshop of Eastern Branch, Entomological Society of America.
Member, Northeast Forest Insect Work Conference.

Peters, T. M.
Member, Registration and Hospitality Committee, Eastern Branch, Entomological Society of America (ESA).
Member, National Membership Committee, ESA.

Department of Environmental Sciences

Coler, Robert A.
Chairman, Water Resources Committee, 1971 Franklin County Resource Conservation and Development.

Gunner, Haim B.
Associate Editor, Canadian Journal of Microbiology.

Litsky, Warren
President, Connecticut Valley Branch of American Society for Microbiology.
Consulting Editor, Journal of Environmental Health.
Contributing Editor, Industrias Lacteas
Member, Editorial Board of Applied Microbiology.
Member, Editorial Board of Health Laboratory Science.
Member, American Public Health Association, Subcommittee on Standard Methods for the Analysis of Water and Waste Water, Laboratory Section Council, Environmental Sections Hospital Environment Committee, American Association for Contamination Control.

Mueller, William S.
Member, Editorial Board of the Journal of Milk and Food Technology.

Extension Division of 4-H and Youth

Howes, Merle L.
Trustee National 4-H Foundation.
Member, National Committee on 4-H Programs in the 70's.

Keohan, Joseph A.
Member, National 4-H Urban Program Committee.

Uhlinger, Susan J.
Member, Cooperative Area Manpower Planning Committee.
Member, Regional Hardship Committee, Department of Public Welfare.

Department of Food & Agricultural Engineering

Chen, C. S.
- Special Crop Processing Committee, American Society of Agriculture Engineers, (ASAE)
- Standards Committee, Food Engineering Division, ASAE

Clayton, J. T.
- Secretary, Bioengineering Committee, ASAE
- Nominating Committee, ASAE
- Chairman, Position Paper Subcommittee, Bioengineering Committee, ASAE
- Education and Guidance Committee, ASAE
- Department Chairman Committee, ASAE
- Executive Committee, Connecticut Valley Chapter, ASAE
- Executive and Research Committees, New England Farm Electrification Institute (NEFEI)

Fletcher, S. W.
- Executive Committee, North Atlantic Region of ASAE
- Secretary, Education Committee, ASAE
- Secretary, Steering Committee, ASAE
- Food Engineering Division Executive Committee, ASAE
- Food Engineering Division Technical Committee, ASAE
- Member, Continuing Education Committee, ASAE
- Program Chairman, Food Engineering Division, ASAE
- Member, Food, Drug and Beverage Packaging Committee, ASAE
- Editor, Food Engineering Division Newsletter

Johnson, C. A.
- Milk Handling Equipment Committee, ASAE
- Chairman, Nominating Committee, Connecticut Valley Chapter, ASAE

Light, R. G.
- Member, Water Treatment and Use Committee, ASAE
- Member, Environment of Plant Structures Committee, ASAE
- Member, Dairy Housing Committee, ASAE
- Member, Steering Committee, Structures and Environment Division, ASAE
- Member, Steering Committee, Northeast Dairy Practices Committee
- Councillor, Connecticut Valley Chapter, ASAE to Engineering Societies to New England

Rha, C.
- Career Guidance Committee, ASAE

Whitney, L. F.
- Executive Committee, NAR, ASAE
- Chairman Elect, North Atlantic Region, ASAE
- Power and Machinery Steering Committee, ASAE
- Subsurface Irrigation Committee, ASAE

Zahradnik, J. W.
- Chairman, Bioengineering Committee, ASAE
- Chairman, Nominating Committee, Food Engineering Division, ASAE
- Member, Food, Drug and Beverage Committee, ASME
- Chairman, Subcommittee on CA Storage Standards, ASAE

Department of Food Science and Technology

Clydesdale, F. M.
Member, Scholarship and Educational Committees, Northeast Section Institute of Food Technologists.

Esselen, W. B.
Member, World Food Program Committee and Undergraduate Awards Jury, Institute of Food Technologists
Member, National Research Council Advisory Board on Military Personnel Supplies Committee on Microbiology of Food, and Editorial Board of Food Science and Technology, National Academy of Science

Evans, D. A.
Chairman, Task Force Committee on Cleaning and Sanitizing of the Northeast Dairy Practices Committee
Member, Task Force Committee on Ratings and Certification of the National Conference on Interstate Milk Shipments.

Francis, F. J.
Chairman, Committees on Nominations and Elections, and Undergraduate Awards, Institute of Food Technologists
Member, Committee on Scientific Lectures and Editorial Board, Institute of Food Technologists
National Councillor and member, Steering and Program Committee for Section East, Northeast Section Institute of Food Technologists.

Hankinson, D. J.
Editorial Board, American Dairy Science Association
Board of Directors, Massachusetts Dairy Technology Society

Hayes, K. M.
Member, Subcommittee on Scholarships and Awards, Institute of Technologists
Member, Isker Award Jury, Academic Activities Committee and Vice-Chairman, Scientific Development Research and Development Associates (U.S. Army Natick Labs.)

Hultin, H. O.
Member, Program Committee, 1971 Research Award Committee, and Journal Food Science Editorial Board, Institute of Food Technologists
Sectional Councillor, Northeast Section Institute of Food Technologists

Hunting, W. M.
Sectional Councillor, Northeast Section Institute of Food Technologists

Nawar, W. W.
Member, Committee on Communications, American Oil Chemists' Society

Sawyer, F. M.
Member, Committee on Sensory Evaluation of Foods, Institute of Food Technologists
Member, American Society for Testing Materials Committee E-18
Editorial Board, Journal Milk and Food Technology

Stumbo, C. R.
Member, Nicolas Appert Award Jury, Institute of Food Technologists
National Research Council Advisory Board, National Academy of Science

Department of Forestry and Wildlife Management

Abbott, H. G.
Chairman, Nominating Committee, and Committee to Revise By-Laws, New England Section Society of American Foresters

Carlozzi, C. A.
Urban Affairs and Regional Planning Committee, Wildlife Society

Gatslick, H. B.
Chairman, Northeast Section Forest Products Research Society
Treasurer, (½ year) New England Kiln Drying Association

Greeley, F.
Member, Conference Study Committee, and Teaching Subcommittee, Northeast Section Wildlife Society

Hoadley, R. B.
Member, Technician Training Committee, and Treasurer, Northeast Section Forest Products Research Society

Larson, J. S.
Member, Resolutions Committee, Northeast Section Wildlife Society

Mader, D. L.
Co-chairman, Northeastern Forest Soils Conference Group

Mawson, J. C.
Vice-chairman, Yankee Chapter, New England Section, Society of American Forestry

McNamara, W. S.
Treasurer, New England Kiln Drying Association (½ year)

Noyes, J. H.
Member, Committee on World Forestry, and Planning Committee for 1971 National Meeting, Society of American Foresters
Director, Mass. Christmas Tree Growers Association, and Mass. Wood Producers Association

Reed, R. J.
Secretary-Treasurer, Southern New England Chapter American Fisheries Society

Rhodes, A. D.
Chairman, Northeastern Region, Association of State College and University Forestry Research Organizations

Rice, W. W.
Executive Secretary, New England Kiln Drying Association
Secretary, Drying Division, and chairman of News-Digest Committee, Forest Products Research Society
Technical editor, Woodworking and Furniture Digest

Hotel, Restaurant and Travel Administration

Conrade, G.
- Consultant, Third Annual Menu Study, Institutions Magazine
- Publicity Secretary, American Motel & Motel Association

Eshbach, C. E.
- Member, Publication Relational Committee, Society for the Advancement of Food Service Research
- Vice-President, Western Massachusetts Branch, Food Service Executives' Association
- Member, Massachusetts Food Service Educational Council Seminar Committee

Lundberg, D. E.
- Chairman, Nominating Committee, Council on Hotel Restaurant & Institutional Education
- Member, Committee on Hospitality Education on Black Campuses, Council of Hotel, Restaurant and Institutional Education
- Member, New Directions Committee, Council on Hotel Restaurant and Institutional Education
- Advisor, Massachusetts Hospital Food Service Directors Association
- Consultant, Florida International University on the establishment of a School of Hotel Restaurant & Travel Services

Robertson, C.
- Chairman, Council Committee on Regional Sections and Affiliate (Foreign) Organizations, Institute of Food Technologists
- Member, of Executive Committee of Food Service Division, Institute of Food Technologists
- Member, Committee on Fat & Oil Sepcifications, Research & Development Associates
- ViceChairman, Board of Governors and Executive Committee, FOOD UPDATE
- Chairman, Sub-committee "Industry Action," Food & Nutrition Committee, American Health Foundation
- Member, Sub-committee, "Food Service Action" and "Government Action", Food & Nutrition Committee, American Health Foundation

Department of Landscape Architecture

Cudnohufsky, W.
- Member, Committee on Research, American Society of Landscape Architects
- Member, Architecture Task Force on Teaching Exchange, National Council of Instructors of Landscape

Kent, R.
- Vice President, Connecticut Chapter, American Society of Landscape Architects

Department of Plant and Soil Sciences

Drake, M.
- Consulting Editor, Soil Science
- Member, International Agronomy Awards Committee, American Society of Agronomy

Drake, M.
Chairman, Hokkaido International School of Sapporo, Japan Corporation

Greene, D. W.
Member, Plant Growth Regulator Committee, American Society for Horticultural Science
Member, Rootstock Committee, American Pomological Society

Havis, J. R.
President, Northeast Region of the American Society for Horticultural Science

Maynard, D. N.
Chairman, Science Funding Policy Committee, American Society for Horticultural Science

Southwick, F. W.
Member, Pomology Section Program Committee, American Society for Horticultural Science

Vengris, J.
Chairman, Herbaceous Weeds Section, Research Coordinating Committee, Northeastern Weed Science Conference.

Zak, J. M.
Member, Cape Cod National Seashore Scientific Advisory Committee

Department of Plant Pathology

Agrios, G. N.
Teaching Committee, American Phytopathological Society

Gilgut, C. J.
Councilor-elect, Northeastern Division, American Phytopathological Society

McKenzie, M. A.
Member, Northeastern Forest Pest Council
Secretary, Committee 26th Annual Conference on Dutch Elm Disease, Massachusetts Forest and Park Association
Advisory Council, TREES "The Journal of American Arboriculture"
Consultant, Executive Committee, Massachusetts Tree Wardens and Foresters Association
Advisory Membership, Massachusetts Council for Trees and Horticulture

Rohde, R. A.
President, Northeastern Division, American Phytopathological Society
Member, Education Committee, Society of Nematologists

Regulatory Services
(Feed, Fertilizer, Dairy Law and Seed Laboratory)

Morgan, R.
Member, Association of Official Analytical Chemists, The Association of Feed Control Officials and The Association of Plant Food Control Officials

Morgan R.
Member, Check Sample and Analytical Tolerances Committee, Association of American Feed Control Officials

Eiben, C.
Member, Association of Official Seed Analysts

Lincoln, W. C.
Member, Association of Official Seed Analysts

Rice, W. N.
Secretary-Treasurer, and Member of Rules and Public Service Committees, Association of Official Seed Analysts
Member, American Association of Seed Control Officials
Chairman, Noxious Weed Seed Committee, and member of Administrative Committee, Seed Control Officials of Northeast States

Suburban Experiment Station

Chater, C. S.
Vice-Chairman, Northeastern Forest Pest Council

Faddoul, G. P.
Member, Committee on Communicable Diseases, Massachusetts Division of Animal Health

Feder, W. A.
Editorial Board, Environmental Pollution

Fellows, Gordon W.
Member, Liaison, and Editorial and Public Relations Committees
Chairman, Nominating Committee, Epidemiology Section, Massachusetts Public Health Association

Galinat, W. C.
Editorial Committee, ECONOMIC BOTANY, Society for Economic Botany

Manning, W. J.
Member, Soil Microbiology Subject Matter, and Extension Committees, American Phytopathological Society

McEnroe, W. D.
Secretary, New England Society of Population Biologists

Department of Veterinary and Animal Sciences

Black, D. L.
President Elect, Massachusetts Chapter, Society of Sigma Xi

Borton, A.
Member, Horse Committee, American Society of Animal Sciences
Chairman, Membership Committee, North Atlantic Section, American Society of Animal Sciences
Member, Horse Research Committee, Northeast Extension Committee

Colby, B.
Chairman, Extension Committee, American Society of Animal Sciences

Damon, R.
President, Massachusetts Chapter, Society of Sigma Xi
Representative, Biological Science Information Storage and Retrieval, American Society of Animal Sciences
Representative, American Society of Animal Sciences Task Force on Communications and Information Services in Biology, American Institute of Biological Sciences

Gaunt, S. N.
Chairman, Milk Composition and Payment Committee, American Dairy Science Association
Member, Nominating Committee, Northeast Section, American Dairy Science Association

Harris, W. K.
Member, Communicable Disease, Education, Library Committees, Mass. Veterinary Association

Lyford, S. J.
Chairman, Resolutions Committee, American Dairy Science Association

Sevoian, M.
Member, National Leukosis Committee, American Veterinary Medical Association

Smith, R. E.
Member, Leptospirosis Committee, U. S. Animal Health Association
Delegate, Executive Board, American Association Veterinary Laboratory Diagnosticians
Chairman, Committee on Prophylaxis and Therapy, National Leptospirosis Committee

Smyser, C.
Member, Antigen and Pullorum-Typhoid Testing Committees, Northeastern Conference of Avian Diseases

Snoeyenbos, G. H.
Secretary-Treasurer, American Association of Avian Pathologists (AAAP)
Business Manager, and Editorial Board, AVIAN DISEASES
Chairman, Management and Finance Committee, AAAP
Member, Salmonella Committee, AAAP
Member, Salmonella Committee, American Association Veterinary Laboratory Diagnosticians Permanent Secretary, New England Conference on Avian Diseases
Chairman, Antigen Committee, New England Conference on Avian Diseases

Stern, D.
Director, American Association of Extension Veterinarians(AAEV)
Chairman, Education and Communicable Diseases Committees, AAEV
Member, Public Relations Committee, Massachusetts Veterinary Medical Association

Weinack, O.
Member, Mycoplasmasis Committee, American Association of Avian Pathologist
Chairman, Mycoplasma Committee, Northeastern Conference on Avian Diseases

RESEARCH HIGHLIGHTS

An Environmental Quality Executive Council (EQEC), established in December of 1970, has the primary charge of --

Coordinating the activities and program responsibilities of the College, the Agricultural Experiment Station and the Cooperative Extension Service with those of other public agencies and private organizations "in efforts to assure a quality environment for all people of the Commonwealth."

The Council will advise the Dean and Director and, as appropriate, will conduct or sponsor studies for obtaining information and developing recommendations regarding environmental quality -- including the scope and direction of Experiment Station research.

EQEC has compiled for publication a series of task-force reports assessing the effects of the various agricultural industries on quality of land, water and air. In progress is an inventory of environmental quality protection activities within the College.

Coordinator of EQEC is W. J. Mellen, Associate Director of the Experiment Station; vice coordinator is E. K. Knapp, Assistant Director of the Extension Service. Each of the 13 departments of the College is represented on the Council by a faculty member and alternate. Also represented are the U. S. Forest Service and the Soil Conservation Service.

Environmental Forestry Research

Increased commitment to research on forests and trees in relation to environmental quality was evident in two major developments:

1. A contract between the Experiment Station and the U. S. Forest Service established on campus a pioneering center for research on forestry in urban areas. Forest Service personnel will conduct studies in

collaboration with University faculty and graduate students with emphasis on the aesthetic, recreational, and anti-pollution potentials of trees and wooded areas in Massachusetts.

2. The University, through the Agricultural Experiment Station became a charter member of a Consortium for Environmental Forestry Studies with eight other northeastern universities "to initiate, support and carry out programs of research and graduate education relating to the urban-forest interface in the megalopolis of the northeastern United States."

Through funds provided by the U. S. Forest Service, and hopefully from other sources, the Consortium will make research grants to both member and non-member institutions. Assoc. Dir. William J. Mellen is the Experiment Station's representative to the Consortium with Prof. Arnold Rhodes, head of the Department of Forestry and Wildlife Management, as alternate.

Rural Community Development

0 Massachusetts' share of $3 million in federal experiment station funds for research in "Rural Development" for Fiscal '71 resulted in the initiation of four new projects and increased support of six research projects already in progress.

The new projects, two of which contribute to regional research, are:

Economical Structural Models for Rural and/or Suburban Home (Department of Food and Agricultural Engineering)

Agricultural Land Use in Relation to Environmental Quality (Department of Agricultural and Food Economics)

Community Services for Nonmetropolitan People in the Northeast (Department of Agricultural and Food Economics) Regional

Natural Resource Policies and Planning for Rural Development (Departments of Forestry and Wildlife Management, Agricultural and Food Economics, Landscape Architecture and Regional Planning) Regional

D. RESEARCH PROJECTS

Department of Agricultural and Food Economics

Brown, A. A.
The Efficiency of Alternative Railroad Costing Methods as a Basis of Rate Determination (Exp. Sta.).

Crossmon, B. D.
Feasibility Study for Extending Unemployment Insurance Coverage to Agricultural Workers in Northeast States (U. S. Dept. of Labor).

Christensen, R. L.
Selected Interrelationships Between Poultry Marketing and Other Sectors of the Economy (Exp. Sta.).
The Impact of Insurance Companies on Rural Communities and Families (Exp. Sta.).
Agricultural Land Use in Relation to Environmental Quality (Exp. Sta.).
Agricultural-Urban Competition for Land and Water Resource Use in the Northeast (Economic Research Service, U.S.D.A.).

Engel, N. E.
An Input-Output Analysis of Sectors of the Massachusetts Economy (Exp. Sta.).
Agricultural Land Use in Relation to Environmental Quality (Exp. Sta.).
Community Services for Non-Metropolitan People in the Northeast (Exp. Sta.).
Natural Resource Policies and Planning for Rural Development (Exp. Sta.).

Foster, J. H.
Private Outdoor Recreation Operations and Public Policy (Exp. Sta.).
Complete Cost-Benefit Analysis for Public Decision Making (Exp. Sta.).
Valuation of Benefits and Costs of Wetland Preservation (OWRR, USDI).

Knapp, E. K.
Community Services for Non-Metropolitan People in the Northeast (Exp. Sta.).

Russell, S.
Impact of Labor Unions on Performance in the Milk Industry (Exp. Sta.).

Storey, D. A.
Impact of New Production, Harvesting and Procurement Methods on the Market Structure of the Fishing Industry in the Northeast (Exp. Sta.).

Wyckoff, J. B.
Economic Analysis of Coordinated Watershed Planning (Exp. Sta.).
Developing Methodology for Including Intangibles in Benefit-Cost Analysis of Water Resource Projects (OWRR, USDI).

Cranberry Station

Cross, C. E.
The Ecology of Selected Submersed Aquatic Weeds (Exp. Sta.).
The Mechanization of Cultural, Harvesting and Market Preparation Operations in Cranberries (Exp. Sta.).
Culture and Improvement of Cranberries (Ocean Spray, Inc.).

Demoranville, I. E.
Effect of Natural and Artificial Plant Growth Regulators on Fruit Set and Berry Size in Vaccinium macrocarpon (Exp. Sta.).
Culture and Improvement of Cranberries (Ocean Spray, Inc.).

Deubert, K. H.
Translocation of Pesticides from Cranberry Bogs to Their Surroundings (Exp. Sta.).
The Chemistry of Cranberry Bog Soils (Exp. Sta.).

Devlin, R. M.
The Ecology of Selected Submersed Aquatic Weeds (Exp. Sta.).
The Effect of Natural Artificial Growth Regulators on Fruit set and Berry Size in Vaccinium Macrocarpon (Exp. Sta.).
Influence of Growth Regulators on Pesticide Uptake (PHS-NIH).

Norton, J. S.
Mechanization of Cultural, Harvesting and Market Preparation Operations in Cranberries (Exp. Sta.).

Tomlinson, W. E., Jr.
Insects Affecting Cranberries, Blueberries and Other Ericaceous Plants (Exp. Sta.).

Zuckerman, B. M.
Biology of the Plant Parasitic Nematode, Pratylenchus penetrans (Exp. Sta.).

Department of Entomology

Edwards, L. J.
Pesticide Residues in or on Raw Agricultural Commodities (Exp. Sta.).
Tricarboxylic Acid Cycle Intermediates in Normal and Anesthetized Insects (Exp. Sta.).
Host Selection and Feeding Responses of Insects (Exp. Sta.).

Hall, D. W.
Pathogens and Parasites for the Control of Insects of Medical and Veterinary Importance (Exp. Sta.).

Jensen, G. L.
The Role of Parasites and Predators in the Control of the Alfalfa Weevil (Exp. Sta.).
Integrated Control as an Improved Method of Reducing Pest Populations on Apples (Agway, Inc.).

Peters, T. M.
Biological and Biochemical Factors Influencing the Development of Larval Mosquito Populations (Exp. Sta.).

Stoffolano, J. G., Jr.
Associations Between the Plant Pathogen, Pseudomonas melophthora, and Rhagoletis pomonella (Exp. Sta.).

Department of Environmental Sciences

Gunner, H. B.
- Biological Degradation of Agricultural Pesticides (Exp. Sta.).
- Factors Affecting the Accumulation of Nitrates in Soils, Water and Plants (Exp. Sta.).
- Microbial Degradation of Organic Pollutants of Industrial Origin (WRRC, U.Mass.).

Litsky, W.
- Microbiological Contamination of Hospital Carpeting (John W. Hill Foundation).
- Microbiology of Disposables (Kimberly-Clark Corp.)
- F. A. Methods for Determination of Fecal Streptococci Source (FWPCA, USDI).

Walker, R. W.
- Investigations of Fatty Acids from Neutral Lipid and Phosphatide Fractions of Atypical Mycobacteria (Exp. Sta.).
- Studies of Mycobacterial Lipids (Mass. Tuberculosis and Respiratory Disease League).
- Studies of Mycobacterial Lipids (PHS-NIH).

Department of Food and Agricultural Engineering

Chen, C. S.
- Engineering Systems for Forage Crop Production and Use (Exp. Sta.).

Clayton, J. T.
- Physiological Responses of Chickens to Varying Environments (Exp. Sta.).
- Closed Systems for Animal Sewage Treatment (WRRC, U. Mass.).
- Modular Roof Structures (Agway, Inc.).

Fletcher, S. W.
- Mechanical Injury to Processed Fruits and Vegetables During Handling (Exp. Sta.).

Johnson, C. A.
- Economical Structural Modules for Rural and/or Suburban Homes (Exp. Sta.).

Light, R. G.
- Economical Structural Modules for Rural and/or Suburban Homes (Exp. Sta.).

Pira, E. S.
- Improved Subsurface Irrigation Distribution System (Agway, Inc.).

Rha, C.
- Mechanical Injury to Processed Fruits and Vegetables During Handling Exp. Sta.).
- Themal and Rheological Properties of Proteinaceous Material (NSF).

Whitney, L. F.
- Engineering Systems for Forage Crop Production and Use (Exp. Sta.).
- Improved Subsurface Irrigation Distribution System (Agway, Inc.).

Zahradnik, J. W.
Heat and Mass Transfer Studies in Food Engineering (Exp. Sta.).
Acquacultural Engineering Research (Shellfish Culture) (Towns of Marion, Mattapoisett, and Wareham).
Acquaculture-Environment Interface in the Westport River (N. E. Regional Commission).

Department of Food Science and Technology

Clydesdale, F. M.
Quality Maintenance, Measurement, and Control in the Marketing of Vegetables (Exp. Sta.).
Post-Harvest Physiology of Pomological Fruits (Exp. Sta.).
Color and Quality in Cranberry Products (Ocean Spray, Inc.).
Appearance and Transmission Scales for Food Products (Hunterlab Associates).
Improvement and Stability of Quality in Processed Foods (Glass Container Mfrs. Inst.).

Fagerson, I. S.
Role of Some Trace Organic Compounds in Foods (Exp. Sta.).
Corrected Fluorescence Spectra of Selected Polycyclic Hydrocarbons and Ara Arenes (Perkin-Elmer Corp.).
Minor Components in Grain Spirits (Heublein Co.)
Composition of Corn Hydrolysates (Squib-Beech Nut, Inc.)

Francis, F. J.
Quality Maintenance, Measurement, and Control in the Marketing of Vegetables (Exp. Sta.).
Post-Harvest Physiology of Pomological Fruits (Exp. Sta.).
Color and Quality in Cranberry Products (Ocean Spray, Inc.).
Appearance and Transmission Scales for Food Products (Hunterlab Associates).
Improvement and Stability of Quality in Processed Foods (Glass Container Mfrs. Inst.).

Hultin, H. O.
Enzymatic Control of Quality Factors in Edible Plant and Animal Materials (Exp. Sta.).
Distribution of Glycolytic Enzymes Skeletal Muscle (PHS-NIH).
Control of Lactate Dehydrogenase by Reversible Binding to Subcellular Structures (NSF).
Studies of a Catalytic Reactor Using an Immobilized Enzyme System (NSF).

Levin, R. E.
Effect of Low Temperatures on Quality and Marketability of Food Products (Exp. Sta.).
Aseptic Processing of Foods in Glass Containers (Glass Container Mfrs. Inst.).
Phage Typing of Psychrophiles (PHS-FDA).

Nawar, W. W.
Effects of Thermal Processing on the Chemical Composition of Foods (Exp. Sta.).
Health Significance of Radiolytic Products in Foods (PHS-NIH).

Sawyer, F. M.
Effect of Low Temperatures on Quality and Marketability of Food Products (Exp. Sta.).
Effect of 5'-ribonucleotides on Irradiation Induced Off-Flavor in Ground Beef (Takeda U.S.A., Inc.).
Flavor Evaluation of Alcoholic Beverages (Heublein Co.).

Stumbo, C. R.
Sterilization and Inhibitors in Food Processing (Exp. Sta.).

Department of Forestry and Wildlife Management

Abbott, H. G.
Direct Seeding, and the Influence of Birds and Mammals on Forest Regeneration in the Northeast (Exp. Sta.).

Bond, R. S.
Economic Analysis of the Campground Market in the Northeast (Exp. Sta.).
Changes in Land Values in Mass. from 1950 to 1970 as Related to changes in Land Use (U.S. Forest Service).

Carlozzi, C. A.
Natural Resource Policies and Planning for Rural Development (Exp. Sta.).
Optimal Application of University Resources to Assist Public Agencies on Water Problems (WRRC, U. Mass.).
Programmed Selection of Optimum Uses of a Small Water Resource Subjected to Simultaneous Demand (OWRR, USDI).
Enhancement of Ecologic and Aesthetic Values of Wetlands Associated with Interstate Highways (OWRR, USDI).
An Urban River in its Changing Culture (OWRR, USDI).

Cole, C. F.
Effects of Water Diversion on Estuarine Fauna in Merrimack River, Massachusetts (WRRC, U.Mass.).

Dodge, W. E.
Techniques for Determining the Age of Porcupines (Fish & Wildlife Svc., USDI).
Porcupine Behavior and Control of Population (Fish & Wildlife Svc., USDI).

Gatslick, H. B.
Technological Properties of Wood from Forest Tree Species in the Northeast (Exp. Sta.).
Feasibility of Plywood Manufacture in Berkshire County, Mass. (N. E. Regional Commission).

Greeley, F.
The Control of Bird Depredation (Exp. Sta.).
Food and Shelter Requirements of the Ruffed Grouse in Relation to Energy Regimes (Exp. Sta.).

Hoadley, R. B.
Rheology of Wood Restrained from Swelling (Exp. Sta.).

Larson, J. S.
- Food and Shelter Requirements of the Ruffed Grouse in Relation to Energy Regimes (Exp. Sta.).
- Man-Animal Interactions in the Northeast Forest Environment (Exp. Sta.).
- Dynamics of Land Use Change in the Northeastern United States (U. S. Forest Service).
- A Multivariate Model for Public Management of Freshwater Wetlands (OWRR, USDI).

MacConnell, W. P.
- Use of Aerial Photographs to Evaluate the Recreational Resources of a River (Exp. Sta.).
- Evapo-transpiration, Runoff, Storage, and Drainage Characteristics of Water from Forest Soils (Exp. Sta.).
- Dynamics of Land Use Change in the Northeastern United States (U.S. Forest Service).
- Management of Christmas Trees on Power Line Rights of Way (Holyoke Water Power Co.).

Mader, D. L.
- Genetic and Environmental Adaptability of Forest Trees (Exp. Sta.).
- Evapo-transpiration, Runoff, Storage, and Drainage Characteristcs of Water from Forest Soils (Exp. Sta.).
- Management of Christmas Trees on Power Line Rights of Way (Holyoke Water Power Co.).

Mawson, J. C.
- Distance - Measure Sampling for Volume Growth (Exp. Sta.).

McCann, J. A.
- Life History and Econogy of the American Shad in the Connecticut River (Fish & Wildlife Svc., USDI).
- Evaluation of a Method of Characterizing the Ponded Waters of Massachusetts (WRRC, U. Mass.).
- Statistical Techniques and Estimators for Marine Sport Fishery Inventories (Fish & Wildlife Svc., USDI).

McNamara, W. S.
- Technological Properties of Wood from Forest Tree Species in the Northeast (Exp. Sta.).

Reed, R. J.
- Life History and Ecology of the Blueback Herring in the Connecticut River (Fish & Wildlife Svc., USDI).
- Biological Investigation of the Effects of Pollution onthe Aquatic Environment, Ichthyofauna and Other Organisms in the Millers River Water shed (Fish & Wildlife Svc., USDI).
- Fishery Potential of Four Aquatic Environments Created by Interstate Highway Construction in Massachusetts (Fish & Wildlife Svc., USDI).

Rice, W. W.
- Technological Properties of Wood from Forest Tree Species in the Northeast (Exp. Sta.).
- Accelerated Kiln Drying of Presurfaced 1-inch Northern Red Oak (U.S. Forest Svc.)

Sheldon, W. G.
Food and Environmental Conditions as a Limiting Factor for the Black Duck in Nauset Marsh, Orleans, and Eastham, Mass. (Fish & Wildlife Svc., USDI).
Bobcat Behavior in a Peninsular Habitat (Fish & Wildlife Svc., USDI).
Productivity and Breeding Behavior of Canada Geese at Marshy Point, Manitoba (Fish & Wildlife Svc., USDI).
Ecology of the American Woodcock (Fish & Wildlife Svc., USDI).

Wetherbee, D. K.
Ecology of Vertebrate Pest Containment (Fish&Wildlife Svc., USDI).
Analysis of Sparrow Hawk Nesting Success (Fish & Wildlife Svc., USDI).

Wilson, B. F.
Maple Tree Root Initiation, Development and Geotropic Response (Exp. Sta.).
Role of Mechanical Stress in Cambial Activity of Trees (Exp. Sta.).
Differentiation of Root Types and Their Geotropic Response During Tree Root System Development (NSF).

Department of Landscape Architecture and Regional Planning

Cudnohufsky, W.
Visual-Social Values of Wetlands (OWRR, USDI).

Davis, H. C.
Preparation of a Problem Analysis for "Site Requirements for Landscape Tending" (U. S. Forest Service).

Fabos, J.
Visual-Social Values of Wetlands (OWRR, USDI).

Martin, J. H.
Evaluation of Public Policy Alternatives in Maximizing Public Benefits Arising from Water Quality Improvement (WRRC, U. Mass.).

Zube, E. H.
Preparation of a Problem Analysis for "Site Requirements for Landscape Tenting" (U.S. Forest Service).

Department of Plant and Soil Sciences

Baker, J. H.
Factors Controlling the Chemical Composition of the Soil Solution (Exp. Sta.).
Effect of Land Use on Chemical and Physical Quality of Surface and Ground Waters in Small Watersheds (WRRC, U. Mass.).

Barker, A. V.
Plant and Nutritional Variables Associated with Ammonium Assimilation In Plants (Exp. Sta.).
Factors Affecting the Accumulation of Nitrates in Soils, Water and Plants (Exp. Sta.).
Nitrate and Nitrite Accumulation in Vegetables (PHS-NIH).
Use of Ammonium Nitrogen by Vegetable Crops (Agway, Inc.).

Bramlage, W. J.
Post-Harvest Physiology of Pomological Fruits (Exp. Sta.)

Colby, W. G.
Morphological and Physiological Responses of Perennial Forage Grasses (Exp. Sta.).

Drake, M.
Morphological and Physiological Responses of Perennial Forage Grasses (Exp. Sta.).
Relationships of Mineral Nutrition to Physiological Disorders of Apples (Exp. Sta.).

Greene, D. W.
The Mechanism of Rootstock Dwarfing (Exp. Sta.).
Response of Apples to Succinamic Acid 2,2 Dimethylhydrazide (Uni-Royal, Inc.).

Havis, J. R.
Physiology of Low Temperature and Water Stresses on Plants (Exp. Sta.).
The Dynamics and Energetics of the Soil-Plant-Atmosphere Continuum (SPAC) (Exp. Sta.).
Roadside Development (Mass. DPW-Federal Highway Adm.).

Jennings, P. H.
Comparisons of the Anaylases in Maize During Seed Germination and In Photosynthetic Tissue (Exp. Sta.).

Lachman, W. H.
Genetics and Physiology of Sweet Corn Quality and Biological Efficiency (Exp. Sta.).
Genetics and Breeding of Tomatoes (Exp. Sta.).

Lord, W. J.
Response of Apples to Succinamic Acid 2,2 Dimethylhydrazide (Uni-Royal, Inc.).

Marsh, H. V.
Physiology of Low Temperature and Water Stresses on Plants (Exp. Sta.).
Effects of Certain Pesticides and Plant-Growth Regulators on Plant Metabolism (Exp. Sta.).
The Dynamics and Energetics of the Soil-Plant-Atmosphere Continuum (SPAC) (Exp. Sta.).

Maynard, D. N.
The Relationship of Nutrition to Plant Physiological Disorders (Exp. Sta.).
Plant and Nutritional Variables Associated with Ammonium Assimilation in Plants (Exp. Sta.).
Factors Affecting the Accumulation of Nitrates in Soils, Water and Plants (Exp. Sta.).
Use of Ammonium Nitrogen by Vegetable Crops (Agway, Inc.).

Rosenau, W. A.
The Relationship of Nutrition to Plant Physiological Disorders (Exp. Sta.).
Utilization of Sludge/bark mixtures for Horticultural Purposes (Crane and Co., Inc.).

Stewart, G. L.
An Examination of Potential Tracers to Depict the Movement and Behavior of Water in Soils (Exp. Sta.).
Effect of Land Use on Chemical and Physical Quality of Surface and Ground Waters in Small Watersheds (WRRC, U. Mass.).

Southwick, F. W.
Response of Apples to Succinamic Acid 2,2 Dimethylhydrazide (Uni-Royal, Inc.).

Thomson, C. L.
Optimizing Production of Pickling Cucumbers (J. E. Cain Co.).

Troll, J.
Effect of KNO_3 on Top Growth of Pencross Creeping Bentgrass (Southwest Potash Co.).
Roadside Development (Mass. DPW-Federal Highway Adm.).
Bluegrass Variety Studies (Mass. Golf Assn.).

Vengris, J.
Ecological Studies of Certain Weeds in the Northeastern United States (Exp. Sta.).

Weeks, M. E.
Effect of Land Use on Chemical and Physical Quality of Surface and Ground Waters in Small Watersheds (WRRC, U. Mass.).

Yegian, H. M.
Roadside Development (Mass. DPW-Federal Highway Adm.).

Zak, J. M.
Roadside Development (Mass. DPW-Federal Highway Adm.).

Department of Plant Pathology

Agrios, G. N.
Virus Diseases and Their Control in Deciduous Fruit Trees (Exp. Sta.).
Viruses and Virus Diseases of Forest Hardwoods (Exp. Sta.).

Banfield, W. M.
Lophodermium Needle Cast Disease and Ozone Damage on White Pines (Exp. Sta.).
Role of Fruit Flies in Transmission of Bacterial Soft Rot (Exp. Sta.).

Holmes, F. W.
Pathology of Wilt Diseases of Trees (Exp. Sta.)

McKenzie, M. A.
Pathology of Wilt Diseases of Trees (Exp. Sta.).

Mount, M. S.
Role of Enzymes in Soft Rot Complex of Vegetables and Potatoes (Exp. Sta.).
Induction and Mechanisms of Cellular Injury of Potato Tuber Tissue by Enzymes (NSF).

Rohde, R. A.
Biology of the Plant Parasitic Nematode, Pratylenchus penetrans (Exp. Sta.).

Suburban Experiment Station - Waltham

Craker, L.
Influence of Environmental Stress on Physiological Susceptibility of Plants to Air Pollution (Exp. Sta.).

Feder, W. A.
Air Pollution Problems in the Northeast (Exp. Sta.)
Influence of Environmental Stress on Physiological Susceptibility of Plants to Air Pollution (Exp. Sta.).
Air Pollution/Plant Disease Interactions (PHS-EPA).
Chronic Effects of Low Levels of Air Pollutants upon Floricultural and Vegetable Plants in the Northeast (PHS-EPA).

Galinat, W. C.
Cytogenetics, Morphology and Evolution of Corn and Its Relatives (Exp. Sta.)
Genetics and Physiology of Sweet Corn Quality and Biological Efficiency (Exp. Sta.).
Evolution of the American Maydeae (NSF).

Manning, W. J.
Control of Root Rot Diseases of Greenhouse Floricultural and Vegetable Crops (Exp. Sta.).
Influence of Environmental Stress on Physiological Susceptibility of Plants to Air Pollution (Exp. Sta.).

McEnroe, W. D.
American Dog Tick, Comparative Toxicology and Behavior (Exp. Sta.).

Naegele, J. A.
Air Pollution Problems in the Northeast (Exp. Sta.).
Air Pollution Damage to Vegetation in the New England Area (PHS-EPA).

Department of Veterinary and Animal Sciences

Anderson, D. L.
Endocrine Physiology Associated with Nutritional-Environmental Interactions in Fowl (Exp. Sta.).
Nutrition Improvement in the Northeast Region (Exp. Sta.)
Interrelationship of Light and Nutrient Intake on Reproductive Performance of Female Chickens in a Thermally Controlled Environment (Agway, Inc.)

Black. D. L.
Control of Reproduction in the Bovine Female (Exp. Sta.).
Neural Control of the Mammalian Oviduct (PHS-NIH).
Ovarian Function in the Pony Mare (Grayson Foundation, Inc.).

Borton, A.
Nutrition of the Growing Foal (Agway, Inc.).

Duby, R. T.
Influence of Uterine Extracts on Corpus Luteum Function in the Golden Hamster (Population Council).

Fenner, H.
Interaction of the Acid-Base Pool and the Function of Saliva in the Digestion Processes in the Rumen (Agway, Inc.).

Gaunt, S. N.
Relationships Between Genetic Markers and Performance in Dairy Cattle (Exp. Sta.).

Howe G. R.
Hyperbaric Effects of High Pressure Exposures on Endocrine Physiology (ONR).
Physiology of the Mammalian Oviduct (PHS-NIH).

Mellen, W. J.
Physiological Bases of Inherited Differences in Growth Rate (Exp. Sta.).

Nobel, W.
The Ischemic Factor in Light Chronic Compression of Peripheral Nerves (The Arthritis Fdn.).

Sevoian, M.
Avian Lymphomatosis (Exp. Sta.).

Smith. R. E.
Infectious Diseases Affecting Reproduction in Dairy Cattle (Exp. Sta.).

Smyth, J. R.
Genetic Bases for Resistance to the Avian Leukosis Complex (Exp. Sta.).

Snoeyenbos, G. H.
Respiratory Diseases of Poultry (Exp. Sta.).
Salmonellosis of Poultry (USDA).

Weinack, O. O.
Respiratory Diseases of Poultry (Exp. Sta.).
Salmonellosis of Poultry (Exp. Sta.).
Effect of Linco-Spectin and Spectinomycin for Prevention and Treatment of M. g./Coliform Airacculitis in Chickens (Upjohn Co.).

E. COOPERATIVE PROGRAMS WITH OTHER SCHOOLS AND COLLEGES WITHIN AND WITHOUT THE UNIVERSITY

Department of Agricultural and Food Economics

Vertrees, Robert L.
Presented two lectures on Water Pollution Controls to students enrolled in Orchard Hill 394, "Man and His Environment"

Wyckoff, J. B.
Lectured in College of Engineering

Cranberry Station

Zuckerman, Bert M.
With Department of Biochemistry, Technion, and Department of Biological Ultrastructure, Weizmann Institute, Israel, on nematodes as a model to study aging
With Zoology Department, University of Ghent, Belgium, on morphology of nematodes

Department of Environmental Sciences

Litsky, Warren
With Department of Public Health; teaching of two courses and advising of eight M.S. degree students
With Epic Program of Westfield School System, teaching course in microbiology of Polluted Waters

Department of Food and Agricultural Engineering

Clayton, J.T., C. A. Johnson, R. G. Light
With Cooperative Extension Services of Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine and New York, Recreation Engineering Symposium

Light, R. G
With the University of Connecticut, exchanging extension engineering competencies in dairy and poultry with Agricultural Engineering Department

Whitney, L.F.
With U.S.D.A. at Michigan State University, on research activity concerned with application of plastic and cellulose foam on apples

Zahradnik, J.W.
With University of Rhode Island, chairman of New England Marine Resources Information Program
With College of Arts and Sciences and School of Engineering, participant, Marine Science; School of Engineering, Ocean Engineering

Department of Food Science and Technology

Clydesdale, F.M.
With School of Engineering, presented two lectures on "The Hunger Crisis in the World" at "Junior Science and Humanities Symposium"

Evans, D.A.
With other state Extension Specialists in the Northeast Region in the formation and development of the Northeast Dairy Practices Committee

Fagerson, I.S.
With Department of Chemistry, presented six laboratory sessions on gas chromatography-mass spectrometry
With Department of Biochemistry presented seminar on "Polycyclic Aromatic Hydrocarbons"

Hultin, H. O.
With Department of Chemical Engineering, initiated a graduate training and research program on the construction of reactors using immobilized enzymes

Levin, R. E.
With College of Arts and Sciences and School of Engineering, participant in Marine Science Program

Nawar, W. W.
With Department of Nutrition and Food, School of Home Economics, in a feeding study to determine the biological significance of certain trace chemical components in processed foods.

Department of Forestry and Wildlife Management

Cole, Charles F.
With College of Arts and Sciences and School of Engineering, participant in Marine Science Program

Hoadley, R. Bruce
With Department of Civil Engineering, coordinated seminar on designing with wood

Departmental Faculty
With eight other universities and U.S. Forest Service, participant in consortium undertaking research in environmental forestry
With universities of Maine and New Hampshire, cooperated to bring distinguished scientist to three institutions (Wildlife Biology)
With Departments of Civil Engineering, Geology and Government, four research projects
With Departments of Botany and Computer Science, taught courses during the year

Department of Hotel, Restaurant and Travel Administration

Eshbach, Charles E.
With the School of Home Economics, coordinator of seminar for Nursing Home Administrators

Lundberg, Donald E.
School of Travel Industry, University of Hawaii, development of course outlines and program for graduate program as member of three-man committee

Department of Landscape Architecture and Regional Planning

With Hampton Institute (Virginia), continuation of fifth annual collaborative problem with architectural students on exchange basis

Department of Plant and Soil Sciences

Anderson, J.F.
With personnel of the U.S.D.A. and several State Experiment Stations in the evaluation of small fruit varieties and selections

Colby, W.G., et al
With University of Rhode Island Experiment Station and Department of Plant Pathology, field experiment on carbohydrate reserves in putting green turf-grass

Goddard, G. B.
With Springfield College, two lectures advanced biology course

Stewart, G.L.
With Geology Department, in the use of natural tritium to determine if the well field in South Amherst is being contaminated by a local dump

Regulatory Service (Feed, Seed, Fertilizer)

With Springfield College and Amherst College cooperation in setting up soil testing program
With Botany Department, seed vitality problem activity

Suburban Experiment Station

Craker, Lyle E.
With U.S.D.A., Beltsville on role of air pollution in soil
With Plant Science Labs, Ft. Detrick, Md. on role of air pollution in soil

Feder, William A.
With Connecticut Agricultural Experiment Station, New Haven, to establish the behavior of ozone-resistant and susceptible cultivars of tomato under long term, low level ozone exposures
With University of Massachusetts, Boston, Departments of Biology and Chemistry, study of biochemical interactions of ozone and plant materials

Galinat, Walton C.
With Biology Department, University of Massachusetts, Boston, State University College, Oswego, N.Y., Bussey Institution of Harvard University, corn (maize) research

McEnroe, William D.
With Harvard School of Public Health, research on Spotted Fever

Naegele, John A.
With Extension personnel at the Universities of Rhode Island, Connecticut, New Hampshire, Vermont and Maine, assessment of air pollution damage to crops in the Northeast

Department of Veterinary and Animal Sciences

Black, Donald L., et al (Laboratory for Reproductive Physiology)
With Departments of Zoology and Bio-chemistry, graduate training grant for study of reproductive problems
With Cornell and Yale Universities, research on three projects involving bovine reproduction

Colby, Byron E.
With Extension Service colleagues at land-grant universities in the Northeast Region: Chairman of Revision Committee New England Sheep Publication, New England Beef Cattle Educational Program, New England Sheep Study Committee

Fenner, H.
With U. S. Regional Pasture Research Laboratory

Gaunt, Stanley N.
With Extension Service colleagues at land-grant universities in the Northeast Region: Chairman of New England Dairy Feed Conference, member of New England Dairy Nutrition Committee, prepared New England Cooperative Feed publication, member of Advisory Committee, Northeast Artificial Breeding Cooperatives

Grover, Robert M.
With New England state universities, Cornell and Rutgers, field study pertaining to shell egg quality

Lyford, S. J.
Participated in the establishment of Dairy Testing, Inc., a non-profit milk testing organization to serve New England

Sevoian, Martin
With Animal Medical Center, New York City, research on bovine leukemia

Weinock, O.
With University of Connecticut, mycoplasma research

COOPERATIVE EXTENSION SERVICE HIGHLIGHTS

AGRICULTURE

- Pollution - The Suburban Experiment Station was awarded two contracts by the Environmental Protection Agency relating to the effects of air pollution. The first contract called for a New England Training Workshop on the recognition of air pollutant effects on plants which has been completed. The second calls for a survey of the damaging effects of air pollutants on crops grown in New England. Data gathered will be used to estimate the total annual cost of crop losses by farmers and growers, principally in Massachusetts, Connecticut and Rhode Island.
- Vegetables - A plastic demonstration greenhouse was designed and built on a Connecticut Valley vegetable farm to provide design information, test the use of equipment for environmental controls, and data on management of crops suited to greenhouses. A near record crop of tomatoes was grown to demonstrate the feasibility of raising a high cost crop in a structure completely automated in terms of heat and ventilation.
- Food Retailing - A study of food retailing problems in low income areas revealed that substantially lower rates of profit by operators of food stores in low income areas is a major problem. Factors contributing to this difference were pilferage, labor expense, security expense and total sales volume. The study indicated that more effective measures must be taken toward reducing the threat of crime before significant progress can be made in revitalizing business in inner city areas.

0 Tree Fruit - A 2-day New England Fruit and Trade Show was held in January 1971. Topics were presented by a number of professionals and specialists from the Land Grant universities throughout New England and elsewhere in the United States and Canada. Subjects discussed were new approaches to insect disease control, the use of growth regulators, labor saving orchard equipment, nutrition problems, and changes in fruit marketing methods. Attendance: 500.

0 Flowers and Nursery - A business management short course for growers was presented in the winter of 1970. Topics included functions of management, managerial accounting and business analysis, cost of production, budgets, linear programming, mechanics and automation in greenhouse operations. Participation: 100.

0 Dairy - Three all-day nutrition meetings were held throughout the state in early December 1970 featuring timely topics on dairy nutrition. Proceedings of these meetings were prepared and distributed. Attendance: 250.

0 In-Service Training - A regional in-service training program for dairy specialists on livestock waste handling and disposal was held at the Center in Durham, New Hampshire, in April. This event was attended by Extension personnel from all of the New England states. Co-sponsor was the Department of Food and Agricultural Engineering.

0 Food Service Seminar - A seminar for supervisors and directors of these programs was held on campus in July 1970. The seminar was funded by a special grant provided by the United States Department of Agriculture. The sessions focused on how to meet the rapid expansion of school food service programs especially in the ghetto and inner city areas were food service facilities are minimal or non-existent. Participation: 112.

COMMUNITY RESOURCE DEVELOPMENT

0 A short course entitled "Ecology In Action" composed of 16 sessions was held from September 22, 1970 through January 19, 1971 in the southeastern part of the state. Registration: 170.

0 A highly successful seminar was held in Hyannis in January 1971 which had as its theme "The Fresh Water on Cape Cod." The program included topics on the ground water geology of the Cape, man's impact on ground water resources, factors to be considered in planning for water supply, technical aspects of water supply and effect of land development on water supply. Participation: 230.

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4-H AND YOUTH PROGRAMS

0 Statewide - Approximately 45,000 young people are participating in the 4-H and Youth programs which include the TV photographic series, Expanded Food and Nutrition Program and the regular on-going projects.

0 Massachusetts 4-H Center - Groundbreaking ceremonies for the Massachusetts 4-H Center in Ashland took place May 22, 1971. The first building will be completed and ready for use by the spring of 1972. The $million and half facility funded from private sources will add a new dimension to the 4-H and Youth Program.

0 International - During the first two weeks of August 1970, 139 4-H members and volunteer leaders were hosted by British families in Devonshire, England. Massachusetts 4-H members and leaders plan to host a similar group of British young farmers from Ireland in the fall of 1971.

HOME ECONOMICS

0 Expanded Food and Nutrition Program - This program completed its second year of operation. Funds are provided by the United States Department of Agriculture and educational efforts are directed to both adults and youth.

Fifteen professional home economists have been hired to provide leadership and training in the cities where nutrition units have been established. Approximately 275 part-time program assistants have been recruited, trained and hired to work with low income families and youth in 23 cities and towns throughout the state. The objective is to help low income homemakers and youth plan, buy, and use food more effectively. Participation: 25,000.

VIII. SPECIAL PROGRAMS

A. CENTER FOR INTERNATIONAL AGRICULTURAL STUDIES

1. UMASS/AID/MALAWI Project - AID/437
(Terminated November 30, 1970)

The services of Dr. Bert M. Zuckerman, Cranberry Station, were requested by the Malawi Ministry of Agriculture while he was attending the World Congress on Pesticides, Tel Aviv, Israel in February 1971. He assisted in setting up a laboratory of nematology prior to his return to the United States. Dr. Zuckerman previously visited Malawi in June 1969 to advise on nematological problems affecting the production of oil plants, bananas and tobacco.

Gilbert E. Mottla, campus coordinator of the Malawi project, made a final inspection tour in July 1970.

Two faculty members completed two-year teaching assignments at the University of Malawi's Bunda Agricultural College at Lilongwe. They were Francis G. Mentzer, lecturer in Extension and Chief-of-Party, who returned in August; and Joseph Keohan, lecturer in agricultural biology, who returned in September.

The University also assisted in the recruitment of faculty for two new 4-year positions at Bunda College funded by the Agency for International Development.

2. Third Annual Peace Corps Program

Eighteen students were trained for professional level jobs in the Peace Corps during the year. Of these, 13 have been definitely placed, four tentatively placed depending upon final job assignments in Botswana, and one not placed.

Except for two students majoring in geology, those definitely placed are majors in agricultural sciences. Placement of the 13 by countries is as follows: Botswana (5), India (4), and 1 each in Morocco, Ivory Coast, Ethiopia and Columbia.

3. New AID Contract at the University of IFE
(Ibadan, Nigeria)

The Center assisted the University Director of International Programs in the development of this contract and recruitment of staff for the project from the College faculty. This is a cooperative program with the University of Connecticut in which the College of Agriculture was asked to furnish a lecturer in agricultural management for two years at the Institute of Public Administration, University of IFE.

4. International Training Program (AID/399)

This program is conducted in conjunction with the United States Agency for International Development and the Foreign Economic Development Service of the United States Department of Agriculture.

Its function is three-fold:

To train for AID, on a short-term basis, international participants who hold supervisory positions in various divisions of the ministries of agriculture in their respective countries.

To administer the graduate training, in various departments of the College, of AID-sponsored personnel from ministries of agriculture and foreign research institutes.

To develop special programs for short-term professional or government visitors from foreign countries.

Among the students who completed their academic training in 1970-71 were Emmanuel Adegbenjo, Nigeria; Mohamed Amman, East Pakistan; Huai Chen, Taiwan; Miss Jeanne Novica, Indonesia; and Florentinus Winamo, Indonesia.

5. Miscellaneous Activities

Special programs and/or conferences were arranged for the following visitors from foreign countries.

In August 1970, 120 young Japanese visited the University campus for three days. The group was sponsored by the Hokkaido Youth Promotion Council.

Dr. Eugeniuz Rembowski, Director of the Institute of Fermentation, Warsaw, Poland, was a training participant on campus for a period of three months. Sponsored by the Food and Agriculture Organization of the U.S., Dr. Rembowski's training program was developed by our Department of Food and Agricultural Engineering.

Dr. James W. Cowan, Associate Dean of the Faculty of Agricultural Sciences, American University of Beirut, Lebanon, conferred with staff of our College of Agriculture and the University's Graduate School. Dr. Cowan was interested in obtaining information about procedures and organization of graduate study at his university.

Recent visitors to campus were the Honorable Aleke Banda, Malawi Minister of Finance, Information and Tourism; His Excellency, Mr. N. W. Mbekeani, Malawi Minister to the U.S. and U.N.; and Mr.George Jaffu, Secretary of the Treasury.

The Malawi officials conferred with administrative officers of the University's College of Agriculture, School of Engineering and School of Physical Education regarding a continuing relationship between the University of Massachusetts and the University of Malawi.

Conferences resulted in UMass authorization for 13 Malawian students to be sent here at the expense of the Malawi Government for undergraduate training in: Engineering (5), Hotel,Restaurant and Travel Administration (4), and Physical Education (4).

Prior to the visit of the Malawi Government Officials, Dr. Lewis Mughogho, Chairman of the Department of Crop Production, Bunda College, Lilongwe, Malawi, visited campus to confer with College of Agriculture staff about recruitment of faculty for the 1971-72 academic year at Bunda College.

Mr. Paul Bridston, Assistant Inspector-General of the U.S. State Department, visited campus to confer with members of the University community concerned with international education. Conferences explored ways and means of improving relationships between universities and the Agency for International Development in the implementation of technical assistance programs.

B. CIVIL DEFENSE TRAINING PROGRAM

Two new training programs in Emergency Highway Traffic Regulation and Post Attack Employment of Construction Resources were added during the year. The former was developed to conduct operational field tests of a federal and state plan written to control all vehicular traffic during times of the extreme emergency. Two such programs were conducted in Northampton and Arlington.

The Corps of Engineers under contract with the Office of Emergency Planning developed an operational plan for the employment of construction resources during an emergency. The University Civil Defense Training Program in cooperation with the Regional Office of Civil Defense and the Corps of Engineers conducted the first such operational field exercise for a metropolitan city in the United States. This test was conducted in Worcester. The written evaluation of this exercise possibly will lead to integrating this type of training throughout the United States via the Universities Civil Defense Training Extension Programs.

An Emergency Operations Simulation Exercise conducted in New Bedford by the University Civil Defense training staff also proved successful. In a letter to the Director of the Office of Civil Defense, the New Bedford Civil Defense Director stated: "Not only did the University team do a superb job, but for the first time in my 20 years on this job and as a direct result of the training exercise, New Bedford Civil Defense has the cooperation of the Mayor and city department heads in going ahead with plans for a suitable Emergency Operations Center."

A total of 10 on-going 32-hour courses and one Civil Defense Management Conference also were conducted. The courses were conducted as one-week (five consecutive days) or night courses based on the needs and availability of students. Course titles and the number conducted were:

	Number Courses
Civil Defense Management	1
Radiological Monitor Instructor	2
Emergency Operations Simulation	7

C: MISCELLANEOUS

The Department of Food and Agricultural Engineering was host to FAO Fellows, Mr. George Chen, Taiwan; and Dr. Eugene Rembowski, Poland; Dr. Rembowski studied for three months on ultrafiltration processing; and Chen obtained his Master's Degree and undertook special studies on dehydration and dimensional change "and food freezing in fluidized beds."

The Department of Landscape Architecture sponsored, with the University of Massachusetts Landscape Association, a conference on Private Land Development and the Public Landscape for professionals and students. Also, coordinated the proceedings for the Annual Tree Warden's Conference.

The Department of Agricultural and Food Economics served as host to the first annual conference of the Northeastern Agricultural Economics Council held at Amherst College. The conference theme was "Environmental Quality and the Rural Economy."

IX. CONTROL PROGRAMS

A. PULLORUM DISEASE ERADICATION

In the 1969-1970 testing season, 261 chickens, turkey, and game bird flocks were tested representing 356,565 samples. No pullorum or fowl typhoid infection was found in the commercial breeding flocks. Pullorum infection was found in five fancier flocks; the infection was eliminated by retesting. Paratyphoid infection was detected in eight chicken flocks tested for pullorum disease.

B. MYCOPLASMA GALLISEPTICUM TESTING

A total of 449,952 samples was tested by the Rapid-Serum Plate Agglutination Method for *Mycoplasma gallisepticum*. Fifty-two chicken breeder flocks, 326,798 adult birds, were tested *in toto* and found free of *M. gallisepticum*. Five turkey flocks, 2,252 birds, and three pheasant flocks, 6,820 birds, were total tested and found free of *M. gallisepticum*.

Random 5 to 10% tests were conducted in forty-six flocks, 28,753 birds, under five months of age, and of these, three flocks were positive for *M. gallisepticum*. Random tests were conducted on 28 flocks, 28,821 birds over five months of age and of these five flocks were positive.

A total of 92,610 tests for *M. synoviae* were conducted during this testing season.

C. MASTITIS TESTING

Enrolled herds undertake an intensive program of testing, treating, and retesting until declared free of this infection. Once freed, these herds are tested semiannually to be sure they maintain their *Str. agalactiae*-free status and to monitor other types of mastitis which may be present.

During 1970, 51 herds were initially tested, 39 of which were found to contain *S. agalactiae*-positive cows (76%). This percentage represents an increase in the number of positive herds identified annually for the past 13 years.

A total of 29 herds containing 1387 cows was declared free of *S. agalactiae* during the year. The mean herd size was 48 cows and an average of 13.3 head (28%) were initially found infected.

Seminannual testing in 384 herds disclosed the fact that 14 had become reinfected (3.6%). In the majority of these cases infected replacement animals had not been tested prior to entering the milking line.

Diagnostic testing was performed in 125 herds involving 1022 head at the request of veterinary practitioners, local health boards, or dairymen.

D. REGULATORY SERVICES - (Feed, Seed, Fertilizer, Dairy Laws Control)

The Soil Testing Laboratory tested 2200 samples and referred the results to the specialists for advice as to fertilizer needs for the crops to be grown. The staff has given help to teachers in several schools and colleges in their program for testing soil.

Forage evaluation has been made in cooperation with the Departments of Agronomy, and Veterinary and Animal Sciences. About 800 samples of hay and silage were analyzed for moisture, crude protein and digestible dry matter. The results obtained have enabled dairymen to utilize available forage more efficiently.

Pesticide residue analyses were made on various selected toxicology samples using the gas chromatographic technique.

Toxicological examinations were made on 35 samples including stomach content and viscers of various farm and wild animals. The careless use of pesticides was indicated in a number of cases.

Analytical services for the State Purchasing Agent. About 1200 samples of feed, fertilizer and other materials were analyzed and/or examined microscopically to determine whether State specifications were being met.

Other analyses includes: 500 samples for various drugs, 800 fertilizer samples tested for phosphorus and other minerals, and 800 samples analyzed for potash, and 100 samples for vitamins.

Besides the routine analyses this service has been active in the Collaborative check sample program of the Association of Official Analytical Chemists and the Referee tests of the Association of Official Seed Analysts.

The Seed Laboratory tested about 1950 samples of seed during the fiscal year. Approximately 1200 of these are official samples sent by the market investigators and the others were service and research samples. Besides the usual tests for seed quality, involving germination and purity, special studies of seeds for the Massachusetts Archaeological Society and others were made.

The Dairy Law control service continued its regular work of visiting all milk inspection laboratories in the Commonwealth to check the proper functioning of apparatus and the conduct of the work. Eighty certificates were issued to candidates who were examined and found qualified to test milk and cream for butter fat content; and 32 bulk tank driver tests were given. Around 1800 pieces of Babcock glassware were calibrated and 88 certifuges were checked.

E. SHADE TREE LABORATORIES

Dutch Elm Disease

From tissue plantings (1941 to 1971), 178,147 elms in the state were confirmed for this disease in all 14 counties (349 of the 351 towns). Efforts were continued to propagate disease resistant trees by crosses and cuttings. For a second year in succession the half-million elm seed irradiated at Brookhaven in 1970 germinated poorly. Germination of the check seed was equally poor. Of the

one-third million elm seed irradiated at Brookhaven in 1969 only 545 produced seedlings in 1970, including 10 apparent mutants. From 4573 trees inoculated in 1970, only 68 were selected as showing more than 50% of each tree to be apparently wilt free. Similarly 91 trees have survived inoculation 3 times and 19 other trees twice in past 10 years from more than 6,000,000 irradiated seed. Certain elm clones for breeding research have been received from the Netherlands. These trees will be held under quarantine regulations in the shade tree nursery at Belchertown.

The practical programs conducted by towns for the control of the Dutch elm disease have been handicapped by current regulations against burning and spraying in many parts of Massachusetts. Adequate substitute measures are not yet available although wood chipping machines offer a measure of help in eliminating part of the elm wood contributing to the spread and increase of the disease.

Other Activities

The Tree Wardens, Arborists and Utilities Conference, March 1971, included a varied program with published Proceedings distributed at the time of Registration: Three series of Tree Workshops were held in 1970, and the 25th Annual Conference on Dutch Elm Disease and other tree problems was sponsored at the Waltham Field Station by the Massachusetts Forest and Park Association in October.

During the past year, tree and related commodity groups incorporated an organization known as the Massachusetts Council for Trees and Horticulture. The organization fills a long felt need for a united and informed membership on professional matters, with a qualified managing director, to act as a respected force in dependable tree and other information.

F. DIAGNOSTIC LABORATORIES

The College provides veterinary diagnostic services at Waltham through the Suburban Experiment Station and at Amherst through the Department of Veterinary and Animal Sciences. Most of the poultry diagnostic work is performed at Waltham. Poultry and large animal diagnostic services, as well as Control Programs are conducted by the Department of Veterinary and Animal Sciences.

SUMMARY

I. Diagnostic Laboratories

During the calendar year January 1, 1970 through December 31, 1970, a total of 5149 avian and mammalian specimens in 1079 consignments was submitted for laboratory examination. Specimens submitted were as follows:

AVIAN	Amherst	Waltham
Chicken	865	2,865
Turkey	76	306
Pheasant		54
Duck	1	124
Pigeon	2	67
Miscellaneous (9 species)	8	38
Totals	952	3,454

MAMMALIAN	
Cattle	337
Sheep	22
Swine	54
Goats	2
Horses	99
Dogs	51
Cats	9
Miscellaneous (8 species)	62
Totals	636

II. Control Services

	Samples Tested	
Pullorum Disease Testing	356,565	
Mastitis Control Service	165,605	
Mycoplasma Testing	542,562	2,951
Totals	1,064,732	2,951

ANNUAL REPORT

OF THE

COLLEGE OF ARTS AND SCIENCES

1970-1971

UNIVERSITY OF MASSACHUSETTS AT AMHERST

UNIVERSITY OF MASSACHUSETTS

College of Arts and Sciences

A N N U A L R E P O R T

Period Covered: July 1, 1970 through June 30, 1971

by

Jeremiah M. Allen, Dean of Humanities and Fine Arts; and Acting Dean of Natural Sciences and Mathematics

and

Dean Alfange, Jr., Dean of Social and Behavioral Sciences

TABLE OF CONTENTS

Page

I. BUDGET

Budget Allocations 1
Funds Encumbered, Fiscal Years 1968-1971 2

II. ORGANIZATION CHARTS

A. Departments and Administrative Units 5
B. Degrees, Majors and Other Programs of Study . . . 6

III. PERSONNEL

A. Professional. 9
1. Administration, Faculty and Other Professional Personnel. 9
2. Appointments to the Rank of Professor Emeritus 10

B. Non-Professional Personnel 10

IV. STUDENTS

A. Enrollment, Teaching Loads 13
B. Majors 14
C. Degrees Awarded 15

V. FACULTY

A. Publications 17
B. Sponsored Research and Service Projects 17
C. Other Professional Activities of the Faculty . . 17
D. Fellowships and Other Special Recognition Accorded Faculty Members 18
1. Distinguished Teacher Awards 18
2. Honors for Distinguished Scholarship, Prizes and Awards of Special Fellowships 19
3. Faculty Growth Grant Recipients 20

VI. MAJOR ACCOMPLISHMENTS AND SPECIAL PROGRAMS

A. Curricular Revisions. 21
1. Rhetoric Program 21
2. Foreign Language Requirement--A New Foreign Language Preparation Course. . . . 21
3. Freshman/Senior Fine Arts Program. 21
4. Afro-American Studies Program 24
5. English Department 24

TABLE OF CONTENTS

(contd.)

		Page
B.	Report of the College Curriculum Committee . .	23
	1. Undergraduate Curricula	23
	2. Graduate Curricula	24
C.	CASIAC Report (College of Arts & Sciences Information and Advising Center).	24
D.	Overseas Programs	
	1. Anthropology Field Training Program in the West Indies	25
	2. The Bologna Summer School Program	25
	3. The Freiburg, Germany Program	25
	a. Summer Institute	25
	b. Academic Year	26
	4. Madrid Summer Seminar	26
	5. Oxford Summer Seminar	26
	6. Programs in France	26
E.	Other Special Programs	
	1. Washington Summer Internship Program. . . .	27
	2. Communication Disorders Clinic.	27
	3. NSF Development Grant for Psychology. . . .	27
	4. Geology Department Special Programs	27
	5. Mathematics/Statistics Departments	29
	6. Zoology Department	29
F.	Future Plans and Needs	30

APPENDIX A

Table		Page
1	Professional Positions (FTE) Filled by Rank.	A- 1
2	Number of Faculty Positions (FTE) Filled by Department, Faculty, and Rank: Fall Semester.	A- 2
3	Professional Personnel Actions	A- 3
4	Non-Professional Positions by Rank	A- 4
5	Faculty Positions and Secretarial Positions (FTE Basis) By Department and Faculty 1970-71	A- 5
6	Ratios of Faculty Positions to Secretarial Positions and to Technical Positions	A- 6
7	Comparative Enrollments (Head Count) at the University of Massachusetts, Amherst by Classes and by Colleges (September of each year)	A- 7
8	Comparative Enrollments in Percentages at the University of Massachusetts Amherst by Classes and by Colleges (September of each year)	A- 8
9	Instructional Students by Department and Faculty (Fall Semester)	A- 9
10	Student-to-Faculty Ratios (September 1970) with and without Teaching Assistants	A-10
11	Student Majors (Head Count) by Department and Faculty (Fall Semester)	A-11
12	Upperclass Majors by Department and Faculty (Spring Semester)	A-12
13	Degrees Awarded	A-13
14	Books and Monographs by Department and Faculty (1970-1971)	A-14
15	Payroll from Research and Training Grants and Contracts (Fiscal Years 1970 and 1971)	A-19
16	Selected Professional Activities of the Faculty	A-20

APPENDIX B

	Page
NEW FACULTY APPOINTMENTS FOR 1970-71	B- 1
Humanities and Fine Arts	B- 1
Social and Behavioral Sciences	B-11
Natural Sciences and Mathematics	B-18

I. BUDGET

A. BUDGET ALLOCATIONS

	FY 1969	FY 1970	FY 1971
Account numbers:			
03 - Salaries, other[1]	$ 211,113	$ 251,000	$ 272,300
10 - Travel	42,000	42,000	44,510
12 - Repairs & maintenance	41,787	43,000	49,535
13 - Supplies	265,000	245,000	314,500
14 - Postage, telephones & memberships	119,300	104,300	162,000
15 - Equipment	210,000	193,020	212,450
16 - Rentals	25,000	25,000	30,000
Totals	$ 914,200	$ 903,320	$1,085,295
Salaries:			
Accounts 01, 02	9,001,698	11,376,371	13,475,105
Account 03 - Faculty	23,434	22,027	32,900
Grand Totals[2]	$9,939,332	$12,301,718	$14,593,300

Notes:

[1] Figures do not include faculty salaries paid during academic year from account 03.

[2] No allocations are made to the College or to individual departments for the purchase of books.

B. FUNDS ENCUMBERED, FISCAL YEARS 1968 - 1971

The total funds reported by the Treasurer's Office to have been encumbered by direct payment or by transfer to another unit of the University in each of the several accounts during each of the past four years is presented in the table below. Also indicated is the "dollar per student credit hours (SCH)" and, for accounts 10, 14, and 14-1 the "dollars per full-time equivalent faculty position." Positions in the Dean's Office have been included in the total of faculty positions. Finally, the total encumbered for supplies, equipment, etc. (accounts 10-16) is presented as a percent of salaries and other payments to individuals (accounts 01, 02, and 03).

	FY 1968	FY 1969	FY 1970	FY 1971
Student credit hours (SCH)	152,731	164,288	173,587	186,401
Faculty positions	606	668	735	784.5

	FUNDS ENCUMBERED			
	FY 1968	FY 1969	FY 1970	FY 1971
Salaries:				
01, 02, and 03 Fac.	$7,925,299	$9,025,132	$11,398,398	$13,508,004
Other 03	161,169	211,113	252,085	279,638
	1.02/SCH	1.29/SCH	1.45/SCH	1.50/SCH
Total 01, 02, and 03	$8,086,468	$9,236,245	$11,650,483	$13,787,642
Other accounts:				
10 - Travel	$ 38,517	$ 42,126	$ 43,496	$ 42,763
	0.25/SCH	0.26/SCH	0.25/SCH	0.23/SCH
	63.04/Fac.	63.06/Fac.	59.18/Fac.	54.51/Fac.
12 - Repairs and Maintenance	43,031	44,886	44,109	49,974
	0.28/SCH	0.27/SCH	0.25/SCH	0.27/SCH
13 - Supplies	241,495	273,342	248,237	306,080
	1.58/SCH	1.66/SCH	1.43/SCH	1.64/SCH
14, 14-3, Postage, Memberships	27,370	22,987	18,573	38,902
	0.18/SCH	0.14/SCH	0.11/SCH	0.21/SCH
	44.79/Fac.	34.41/Fac.	25.27/Fac.	49.59/Fac.
14-1, Telephone	81,659	99,171	121,691	127,071
	0.53/SCH	0.60/SCH	0.70/SCH	0.68/SCH
	134.75/Fac.	148.46/Fac.	165.57/Fac.	161.98/Fac.
15 -Equipment	188,236	210,294	193,698	208,379
	1.23/SCH	1.28/SCH	1.12/SCH	1.12/SCH
16 -Rentals	21,975	24,672	23,652	28,383
	0.14/SCH	0.15/SCH	0.14/SCH	0.15/SCH
Total, accounts 10-16	$ 642,283	$ 717,448	$ 693,456	$ 801,552
	4.21/SCH	4.36/SCH	3.99/SCH	4.30/SCH
Accts. 10-16/Salaries 01, 02 & 03	7.94%	7.77%	5.95%	5.81%

One is immediately struck by two things in reviewing the report of funds encumbered. The total sum paid in salaries has increased 70 per cent in four years, a fact attributed to growth of the University with increase in the number of faculty and staff, greater numbers of distinguished faculty who command higher salaries, and the consequences of inflation. The funds spent in support of the academic program apart from salaries, wages, honoraria, i.e., the total spent in Accounts 10 through 16 increased only 25 per cent during this same four-year span. Indeed, the total spent in these latter accounts expressed as dollars per student credit hour rose from $4.21 in fiscal year 1968 to only $4.30 in 1971, an increase of only 2.1 per cent. Funds for travel, repairs and maintenance and equipment were actually less per student and faculty in fiscal '71 than four years previously. The total expended for the "things" necessary for teaching, research, and service (Accounts 10-16) equalled 7.94 per cent of the sum spent for personal services (Accounts 01-03) in 1968; the ratio was reduced to only 5.8 per cent in the year covered by this report. This trend must be reversed by larger allocations in Accounts 10 through 16 if we are to continue our progress toward excellence.

II. ORGANIZATIONAL CHARTS

A. DEPARTMENTS AND ADMINISTRATIVE UNITS

COLLEGE OF ARTS AND SCIENCES
(Three Faculties each with its own Dean)

HUMANITIES AND FINE ARTS	SOCIAL AND BEHAVIORAL SCIENCES	NATURAL SCIENCES AND MATHEMATICS
Afro-American Studies	Anthropology	Biochemistry
Art	Asian Studies (a)	Botany
Comparative Literature (a)	Economics	Chemistry
English	Government (b)	Geology/Geography
French, Italian and Classics	Psychology	Mathematics/Statistics
Germanic Languages	Sociology	Microbiology
Hispanic Languages	Speech	Physics/Astronomy (c)
History		Zoology
Linguistics (a)		
Music		
Philosophy		
Rhetoric (a)		
Slavic Languages		

****

Notes:

(a) Asian Studies, Comparative Literature, Linguistics and Rhetoric operate as separate units without departmental status.

(b) The Bureau of Government Research is a part of the Government Department.

(c) The Astronomy Program has a chairman who is also chairman of the Five-College Department.

B. DEGREES, MAJORS AND OTHER PROGRAMS OF STUDY

Majors for Bachelor of Arts Degree:

Anthropology
Art
Astronomy (a)
Biochemistry
Botany
Chemistry
Classics
Comparative Literature
Economics
English
French
Geography
Geology
German
Government
History
Italian
Journalistic Studies
Mathematics
Microbiology
Music
Philosophy
Physics
Pre-Dental Studies
Pre-Medical Studies
Pre-Veterinary Studies
Psychology
Russian
Sociology
Soviet and East European Studies
Spanish
Speech
Zoology

Majors for Bachelor of Science Degree:

Astronomy (a)
Biochemistry
Botany
Chemistry
Geology
Mathematics
Microbiology
Physics
Pre-Dental Studies
Pre-Medical Studies
Pre-Veterinary Studies
Psychology
Zoology

Majors for Bachelor of Fine Arts:

Art Education
Studio Art

Majors for Bachelor of Music:

Music

Programs without a Major:

Asian Studies
Chinese
Danish
Japanese
Latin American Studies
Linguistics
Polish
Portuguese
Statistics
Swedish

Majors for Master of Art or Master of Science:

Anthropology
Art History
Biochemistry
Botany
Chemistry
Comparative Literature
Economics
English
French
Geology
German
Government
History
Linguistics
Mathematics
Microbiology
Philosophy
Physics
Public Administration
Psychology
Russian
Sociology
Spanish
Speech
Statistics
Zoology

Majors for Master of Fine Arts:

Art
English
Speech

Master of Music:

Music

Majors for Doctor of Philosophy:

Anthropology	French	Philosophy
Astronomy	Geology	Physics
Biochemistry	German	Psychology
Botany	Government	Sociology
Chemistry	History	Spanish
Comparative Literature	Linguistics	Speech
Economics	Mathematics	Zoology
English	Microbiology	

Note:

(a) Five-College undergraduate degree program.

III. PERSONNEL

A. PROFESSIONAL

1. Administration, Faculty and Other Professional Personnel

Statistical data concerning the professional personnel of the College is presented in three tables, as follows:

TABLE 1: PROFESSIONAL POSITIONS (FTE) FILLED BY RANK (Appendix A)

TABLE 2: NUMBER OF FACULTY POSITIONS (FTE) FILLED BY DEPARTMENT, FACULTY, AND RANK: FALL SEMESTER (Appendix A)

TABLE 3: PROFESSIONAL PERSONNEL ACTIONS (Appendix A)

In each of the above tables the numbers refer to full-time equivalent positions which are filled as of September of the indicated year.

Changes in both the organization of the College and its administration occurred during the year 1970-71. Dr. Seymour Shapiro, Professor of Botany, who assumed the position of Acting Dean in March, 1969 continued his able administration of the College until his departure on sabbatical leave on September 1, 1970.

The Trustees of the University approved the subdivision of the College into three Faculties in August, 1970, and Dr. Jeremiah M. Allen, Associate Provost and Professor of English, was named Acting of the College effective September 1. In October, 1970, Dr. Dean Alfange, Jr., Associate Professor of Government, was appointed Acting Dean of the Faculty of Social and Behavioral Sciences and Dean Allen was appointed Acting Dean of both the Faculty of Humanities and Fine Arts and the Faculty of Natural Sciences and Mathematics. On March 1, 1971 Deans Allen and Alfange were named Dean of the Faculty of Humanities and Fine Arts and the Faculty of Social and Behavioral Sciences, respectively. Dean Allen continued to serve as Acting Dean of the Faculty of Natural Sciences and Mathematics for the remainder of the academic year.

The number of administrative positions in the College was reduced from 5.5 of previous years to only four during the fall semester and five for the latter half of the academic year. Dr. John M. Maki, Vice Dean of the College and Professor of Government, reduced his administrative commitment to half-time, and there was no new appointment to the position formerly held by Associate Dean Robert W. Wagner.

The number of faculty positions which were filled as of September, 1970, was increased by fifty.(Tables 1 and 2) Thus, while growth continued, it was slowed somewhat from the average of 56.6 additional positions filled during each of the past five years. The greatest absolute and relative increase again occurred in the Faculty of Social and Behavioral Sciences; indeed, this Faculty has grown by 74 percent during the past five years. The Faculties of Humanities and Fine Arts and of Natural Sciences and Mathematics increased by 42 percent and 37 per cent respectively during the same five-year period. The distribution of new faculty positions can be attributed, at least in part, to a continuing increase in student interest in the social and behavioral sciences and to space limitations upon growth in the natural sciences. The distribution of faculty positions according to rank is not significantly different from that of the previous year.

There were no additions to the 13 non-teaching professional positions in the College. Two Staff Assistants were promoted to Staff Associates.

Teaching Assistants numbered 608 full-time equivalents at $3,000 each. This is 63 more than the previous year; thus their number was equivalent to 77.5 percent of the number of faculty positions as compared to 74.0 percent the previous year.

Post-doctoral research associates contribute to the scholarly activities in the departments without cost to the state because each is supported on grant funds. During the past year they numbered 52, working in seven departments in the Natural Sciences and Mathematics.

Professional personnel actions are summarized in Table 3. Each action was considered on its own merits, and further comment on this summary of actions is unnecessary.

2. Appointments to the Rank of Professor Emeritus

Four members of the faculty were appointed Professor Emeritus: Russell K. Alspach (English); Clarence W. Shute (Philosophy); Aron Pressman (Slavic Languages); and Philip L. Gamble (Economics).

Each of these professors contributed to the growth of the University by his scholarship, teaching, leadership, and other personal qualities which engendered the respect of his peers, the students, and members of the staff. Each was the head of his department during a part of his career, and Professor Shute was Acting Dean of the College of Arts and Sciences during 1960-61.

B. NON-PROFESSIONAL PERSONNEL

Statistical data concerning the non-professional personnel of the College is presented in three tables, as follows:

TABLE 4: NON-PROFESSIONAL POSITIONS BY RANK (Fall of each indicated year) (Appendix A)

TABLE 5: FACULTY POSITIONS AND SECRETARIAL POSITIONS--(FTE BASIS), 1970-71 BY DEPARTMENTS (Appendix A)

TABLE 6: RATIOS OF FACULTY POSITIONS TO SECRETARIAL POSITIONS AND TO TECHNICAL POSITIONS (Fall of each indicated year) (Appendix A)

Information concerning the distribution of clerical positions among departments is provided in Table 5. Inspection of this table reveals the following facts:

(1) In four departments the ratio of faculty to secretarial positions remains over 9:1 (English 10.4:1; Music 12:1; Philosophy 9.7:1; and Math 11.6:1).

(2) There are five departments with 20 to 30 faculty positions each and two smaller departments in which the highest secretarial position is a senior clerk-stenographer. A senior-clerk typist or junior clerk-stenographer is the highest ranking position in each of seven other departments or programs.

It is a pleasure to recognize the addition to the College of 20 1/2 new clerical and three new technical positions, half of them at the higher grades. This allocation of non-professional positions reverses the trend of increasing faculty-secretarial ratios which has characterized the last few years. While a step has been taken in the right direction, the overall ratio of 7.3 faculty per secretary is too high; it forces faculty to devote time to clerical chores which could be better used for teaching, research, and professional service. The long-standing goal of a five-to-one ratio of faculty to secretarial position remains as our aim for the near future.

The ratio of faculty positions to technical positions has improved significantly, dropping from 15:1 in 1969 to the present level of 13.1:1. However, this is not yet a sufficient improvement to release faculty from secretarial or technical chores in order that they might spend more time with students.

IV. STUDENTS

Both undergraduate and graduate programs are of concern to the College. This section of the report pertains primarily to the undergraduates because of their close association with the College as a whole. Graduate students are generally more closely associated with their particular departments.

A. ENROLLMENT, TEACHING LOADS

Statistical data are presented in the following tables:

TABLE 7: COMPARATIVE ENROLLMENTS (HEAD COUNT) AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST BY CLASSES AND BY COLLEGES (September of each year)
TABLE 8: COMPARATIVE ENROLLMENTS IN PERCENTAGES AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST BY CLASSES AND BY COLLEGES (September of each year)
TABLE 9: INSTRUCTIONAL STUDENTS BY DEPARTMENT AND FACULTY (Fall Semester)
TABLE 10: STUDENT-TO-FACULTY RATIOS (September 1970) WITH AND WITHOUT TEACHING ASSISTANTS

The College was created in 1955 by the union of the former School of Liberal Arts and the School of Science. The total enrollment in the University and in each of its separate units in the fall of that year, and at three-year intervals through 1964, and in each succeeding year is presented in Tables 7 and 8, expressed as head counts and percentages, respectively. The number of undergraduates enrolled in the College has increased at a somewhat more rapid rate than that experienced by the other units of the University. The number of graduate students has increased about thirteen-fold since 1955, but the percent of these students enrolled in the College of Arts and Sciences has decreased somewhat each year.

The teaching load of each department and faculty and that of the College is measured in terms of "Instructional Students". An instructional undergraduate student is 15-student credit hours in courses applicable to a baccalaureate degree. An instructional graduate student is 8-student credit hours applicable to a graduate degree or earned by an undergraduate in a graduate level course.

In previous years the statistical entity "full time equivalent" (FTE) student has been used. While this unit is very similar to "instructional student" exact comparison is not possible. Nonetheless, it is apparent from the data in Table 9 that the marked increase in enrollment in courses in the Social and Behavioral Sciences has continued for another year. There have been lesser increases in each of the other two Faculties.

A comparison of the number of "instructional students" (FTE students in the years prior to 1970-71) enrolled in courses offered by the College in the fall of each year and the number of majors in the College is presented in the following table:

	1967*	1968*	1969*	1970
Instructional Students	11,030	11,710	12,029	13,324
Majors	7,807	8,398	9,879	10,681
$\frac{\text{Instructional Students}}{\text{Majors}}$	1.41	1.39	1.22	1.25

*Indicates calculated as FTE students.

That the ratio of instructional students to majors exceeds a value of one indicates that, first of all, some majors take more than 15 hours (though the significance of this is reduced by the number of majors taking fewer than 15 hours) and, secondly, the teaching efforts expended are applied to a substantial number of non-majors. Thus, nearly 20 percent of the total teaching load of the College this year can be designated as service to students outside the College.

Student/faculty ratios, based upon the instructional students and faculty positions, are presented in two forms in Table 10. The calculation is first made using only faculty positions and then with teaching assistants counted as sharing the load. The teaching assistant equivalent is an approximation obtained according to the rule that three assistantships, resulting from the sum of money ($3,000) available as the average stipend, are equivalent to one FTE faculty position.

There is a continuing effort on the part of the College and its faculty to increase student/faculty contacts and to personalize programs and areas of study. Individual "special problems" and "Honors" courses and theses are encouraged for superior students. Coupling this with the expansion of the graduate school and the attendant increase in effort on the part of the faculty in supervision of masters and doctoral theses, it becomes increasingly important to reduce the student/faculty ratio. The ratio for the past five years has been as follows:

1966-67	18.7
1967-68	18.2
1968-69	17.6
1969-70	16.4
1970-71	16.9

A tentative, yet realistic, goal for this ratio is 15:1, a goal that needs to be reached if students are to receive adequate individual attention.

B. MAJORS

Statistical data is presented in the following tables.

TABLE 11: STUDENT MAJORS (HEAD COUNT) BY DEPARTMENT AND FACULTY (Fall Semester) (page A-11)

TABLE 12: UPPERCLASS MAJORS BY DEPARTMENT AND FACULTY (Spring Semester)(page A-12)

Inspection of the data on undergraduate majors in Table 11 reveals trends similar to those noted last year; a decrease in the number of majors in the Humanities and Fine Arts and the Natural Sciences and Mathematics, an increase in the Social and Behavioral Sciences, and, again, a large number of students who have not yet selected majors, counted here in the CASIAC total. This last fact masks any changes in the selection of departmental and program majors by undergraduates.

Changing patterns in the majors selected by undergraduates appear in Table 12, which is based on only junior and senior majors. During the past year, again similar to the year before, 53.3 percent of the upperclassmen had majors in one of four departments: English (16.63); History (11.41); Psychology (14.05); and Sociology (11.26). Here, too, trends in declaration of majors may be seen by comparison with previous years.

	1968	1969	1970	1971
English	20.08	20.61	17.98	16.63
History	12.31	12.02	11.80	11.41
Psychology	8.96	9.45	11.30	14.05
Sociology	7.60	8.48	10.90	11.26

The gradual increase of majors in the largest departments of the division of Social and Behavioral Sciences is anticipated by a seemingly corresponding gradual decline in the departments of English and History. The absolute number of students enrolled in the various departments show a mixture of decreases and increases, but declines of probable significance occurred in the foreign languages, chemistry, mathematics, and the pre-medical program.

The number of graduate students has increased each of the past three years in each of the three divisions of the College. The greatest relative increase of graduate students has been in the Humanities and Fine Arts. Limitations of space probably account for the lesser increase in the number of Natural Science graduate students.

	1968	1969	1970
Humanities and Fine Arts	579	736	962
An increase of:		157	166
Social and Behavioral Sciences	398	483	546
An increase of:		85	63
Natural Sciences and Mathematics	538	562	581
An increase of:		24	19

C. DEGREES AWARDED

A summary of the degrees awarded is presented in Table 13.

V. FACULTY

Information concerning faculty positions is presented in Section III, Personnel and its Tables (Appendix A, Tables 1 - 2).

A. PUBLICATIONS

Fifty-five books and monographs written by members of the faculty were published during the year (Table 14). Of these, thirteen were published by the presses of nine different universities.

Several hundred articles in professional journals plus chapters in books, poems, and book reviews were also printed, and many papers were presented at professional meetings by members of the faculty. Works of art were exhibited and concerts presented in this country and abroad by faculty artists.

B. SPONSORED RESEARCH AND SERVICE PROJECTS

Much of the research accomplished by members of the faculty is greatly facilitated by the award of grants for support of particular projects by both outside agencies and the University itself. An accurate determination of the number of awards and contracts consumated and the annual value of these for the State's fiscal year can not readily be made.

Listed in Table 15 is a reasonably accurate, though conservative, summary of research support according to divisions and departments. The 156 grants with a total value of $84,500 made by the University Graduate Research Council are included.

Fiscal Year	Total Salaries from Non-State Funds
1968	$1,287,428
1969	1,489,395
1970	2,200,737
1971	2,052,995

C. OTHER PROFESSIONAL ACTIVITIES OF THE FACULTY

A complete list of the professional activities of the faculty would be unduly voluminous because of the number and diversity of their exertions. Yet many of the faculty have made significant contributions on the Campus to their departments, the College and the University through work on a wide variety of committees, and through advising students and student groups. Others have contributed indirectly through activities associated with professional societies and advisory boards of Federal support programs.

Table 16 is a compilation of those professional activities of the faculty which involve membership on editorial boards or advisory boards of national organizations,

office in a regional or national professional organization, participation in a symposium sponsored by a national agency, or other activity which is thought to be of national importance.

D. FELLOWSHIPS AND OTHER SPECIAL RECOGNITION ACCORDED FACULTY MEMBERS

1. Distinguished Teacher Awards

The Distinguished Teacher Award, made annually since 1962, is one of the University's attempts to identify and honor distinguished classroom teaching, particularly on the undergraduate level.

Recipients are nominated from the entire University community and screened by a special board of the University Affairs Committee. Presented each year at the Opening Convocation, the award consists of $1,000 and a certificate of commendation.

The award strives to recognize basic teaching excellence by assessment of the following criteria: ability to stimulate students to challenging ideas and effective communication; a real knowledge of subject matter; ability to interpret and relate the results of contemporary scholarship; ability to relate to students; performance in both large and small classes; interest in counseling students, and evidence of a consistently distinguished teaching record over a number of years.

Members of the faculty of this College who have been honored by an award are listed below.

1970:	
Ray, Cadwell L.	Economics
Wilson, William J.	Sociology
1969:	
Cannon, George W.	Chemistry
Gordon, Glen	Government
Kofler, Richard R.	Physics
1968:	
McWhorter, Earle J.	Chemistry
Wilkinson, Thomas O.	Sociology
1967:	
Burke, Terence	Geography
1964:	
Varley, H. Leland	English
1963:	
Richason, George R.	Chemistry
1962:	
Ross, William H.	Physics

2. Honors for Distinguished Scholarship, Prizes and Awards of Special Fellowships

The College is proud to recognize those members of its faculty who have been accorded honors for their distinguished scholarship or have been awarded special fellowships.

HUMANITIES AND FINE ARTS

Art:

Parks, Susan: Worcester Craft Center, 1st prize in Ceramics, 1971.

English:

Emerson, Everett: Folger Shakespeare Library Fellowship, 1971-72.

Mewshaw, Michael: William Rainey Fellowship in Fiction, Bread Loaf Writer's Conference, Summer 1970.

Nelson, John: Max Kade Foundation Grant for Professorship at Freiburg, Germany, 1971-72.

Teunissen, John: ADE/MLA Certificate of Excellence in Teaching, 1970-71.

History:

Potash, Robert: Honorable Mention, Bolton Prize.

Richards, Leonard: Beveridge Prize.

Music:

Fussell, Charles: Institute of International Education Grant for travel abroad.

Philosophy:

Chappell, Vere: National Endowment for the Humanities Fellowship.

SOCIAL AND BEHAVIORAL SCIENCES

Economics:

Sonnenschein, Hugo: Ford Foundation Faculty Research Fellowship, June 1970 - January 1971.

Treyz, George: Honorable Mention, College Level, Kazanjian Foundation Educational Awards Program, Joint Council on Economic Education, 1970.

Government:

Ryavec, Karl W.: Research Fellowship, Russian Research Center, Harvard University, 1970-71.

Vali, Ferenc A.: Summer Fellowship, Hoover Institution, Stanford University, to work on manuscript relating to Turkish Straits and N.A.T.O.

Psychology:

Himmelfarb, Samuel: National Institute of Mental Health, Special Research Fellowship, University of California, San Diego.

Levinger, George: National Institute of Mental Health, Special Research Fellowship, Yale University.

NATURAL SCIENCES AND MATHEMATICS

Botany:

Stein, Otto L.: NATO Senior Research Fellow, Imperial College, London

Chemistry:

Lillya, C. Peter: Alfred P. Sloan Foundation Fellow.

Siggia, Sidney: Two "Tour Speaker of the Year" Awards, American Chemical Society

Physics:

Ford, Norman C.: Guggenheim Fellowship, 1971-72, $14,000, Oxford University, England

3. Faculty Growth Grant Recipients:

Members of the faculty of the College were awarded Faculty Growth Grants by the University for the summer of 1971 to support their research, scholarly or creative work.

Akmajian, Adrian	Linguistics
Armelogos, George J.	Anthropology
Ashton, Thomas L.	English
Cathey, James E.	German
Cox, James C.	Economics
Denny, Walter B.	Art
Drake, Fred W.	History
Dube, Eleanor	Art
Feldman, Fred A.	Philosophy
Foster, Lawrence	Philosophy
Gugli, William V.	Romance Languages
Harrington, John F.	English
Heny, Frank W.	Linguistics
Jenkins, Paul R.	English
Kane, James A.	Economics
Mewshaw, Michael	English
Miller, Lucien M.	Comparative Literature
Nissenbaum, Stephen	History
Rearick, Charles W.	History
Wright, Arthur W.	Economics

VI. MAJOR ACCOMPLISHMENTS AND SPECIAL PROGRAMS

A. CURRICULAR REVISIONS

1. Rhetoric Program

The program in General Rhetoric represents an effort to add new life to an old college requirement. Within the standard two-semester sequence in composition and speech, this program offers flexibility and choice, a systematic theory of language, and perhaps even relevance. Ideally, it is designed to ask two questions: How are words and styles used to communicate? How can such expression be improved?

The Rhetoric program is a new administrative unit, staffed with professors and teaching assistants from both the English and Speech Departments. It expects to confront, at a basic, unspecialized level, many of the languages through which people share their experience, oral and written words, kinesis, film, electronics. Everyone (with certain exceptions for advanced placement) must take at least one of the two courses, Rhetoric 100, where the emphasis is on writing, the student's own and that of others, or Rhetoric 110 which emphasizes oral communication.

Some schools of the University may ask students to take both Rhetoric 100 and 110 to fulfill their requirement. Students in Arts and Sciences, however, are advised to take either of those courses plus one course from the Group II offerings, which are studies of various modes of communication, imaginative writing and expression, theater, political and social discourse, together with continuing practice in writing and discussion.

2. Foreign Language Requirement--A New Foreign Language Preparation Course

A total of 233 petitions, 43 of them second requests, for waiver of the foreign language requirement were considered by the review board and substitutes granted in 87 cases.

A few students are admitted to the University with no previous study of a foreign language and an inability to cope with the usual introductory course. In an effort to introduce these students to a foreign Western European language, an experimental course in which the approach to the new language was from what they knew, native English, was offered during the spring semester. By stressing the grammatical units and patterns of English, comparisons and contrasts can be made to the new language. A better understanding of the English language is an indirect consequence of this course. A meaningful evaluation of the course must await enrollment of the students in regular courses in foreign language instruction.

3. Freshman/Senior Fine Arts Program

One of the problems encountered by previous graduates of the Fine Arts program at the University was that a student could major in the field without ever developing a style of his own or gaining the technical insights necessary for coordinated composition. Under the critical guidance of Professor George Wardlaw, a new program was initiated, the first of its kind nationally, to engender such an awareness during the most crucial years of study, the first and last. During his freshman year, a degree candidate enrolls in a 15-credit, two semester course in which three faculty members participate as a team. From the various points of view, the student is introduced to all facets of composition, color, form perspective, design in an effort to avoid categorizing these aspects and to stimulate

and preserve the awareness of the organically whole composition. If successful, and excitement in the department is electric, this freshman program would allow for large lecture sections and small studio labs, easing the strained teaching load.

During the senior year, the problem is different, for the student, having been introduced to a variety of techniques, is ready to solidify a style of his own. In a special problems course for a total of fifteen credits, each senior student chooses an advisor with compatible aesthetic views. Together they attempt to strengthen confidence in the candidate's particular approach to art, making it reflect his personal taste rather than that of the department.

4. Afro-American Studies Program

The W.E.B. DuBois Afro-American Studies Department, emerging in the spring of 1970 from the status of a program into a degree-granting department, one of the few nationally, was operative by the fall of the same year and has noteworthy indications of vitality and innovation. Of a proposed twenty-one full-time faculty members, it presently functions with thirteen full and three part-time teachers under Chairman Michael Thelwell and offers a Bachelor of Arts with a concentration in any one of three broadly defined areas: Black history, political science, or literature. A degree candidate entering the program must complete the usual University requirement of 120 credit hours of work, which includes both core and major requirements. Due to the size of the present faculty, however, it is impossible for the department to offer the necessary diversity of courses, making cooperation between the five area college Black Studies departments mandatory. Courses, special programs, even faculty hiring, guided by a committee comprised of the five chairmen and a student from each college, are undertaken with a firm commitment to providing the best possible education to the Black student without sacrificing the individual integrities of the departments. The Black University student, consequently, supplements his program with courses from the nearby schools and from other departments within the University at the discretion of his advisor.

Fighting on the front of social relevance as well, the University's Afro-American Studies faculty is also involved with a number of special programs. With the help of Melvin Smith, they are professionally committed to lecturing and tutoring in the Amherst-Springfield areas on the basic problems--social, economic, political, and legal, facing the Black community. Furthermore, the students themselves can be mobilized to help in crucial situations, as were the four students assisting in the Mississippi voter re-registration this past summer, as part of the fundamental black awareness that is the intellectual grail of the department. Even the Black Repertory Theater, directed by Esther Terry, functions as an integral part of the program, for it presents plays, open to the community, that uncover the historical scope, the techniques, and the problems of black dramatic literature.

5. English Department

In an effort to confront the growing complexities of graduate education in English, Dr. Joseph Frank, head of the Department of English, hosted a conference on October 22 and 23 which included among its participants 35 senior members of the Modern Language Association of America. In the opening address, Edmond L. Volpe, CCNY English Department, suggested that a mortal weakness

of the present PhD program lies in an unwillingness to admit diversity of interests and abilities beyond the narrow boundaries of pure scholarship. The consequent result is that schools are unable to produce anything but imitation PhDs. In recognition of the excess of Doctorates and the changing role of the University, the conference made the following recommendations:

a. that the Departments of English which now offer Doctoral degrees undertake to reduce the number of students admitted;

b. that variations of standard graduate programs be developed;

c. that institutions which plan to establish new programs leading to graduate degrees in the study and teaching of literature reconsider the necessity of these programs;

d. that a national conference followed by regional conferences be held between graduate departments and departments of four and two year colleges to determine requirements for undergraduate teachers of English.

As an extension of the same concern, the University's English Department has instituted an extern program in which graduate students are assigned teaching positions with cooperating junior and community colleges. Six students are now successfully involved, giving them not only a source of income but invaluable teaching experience as well.

B. THE COLLEGE CURRICULUM COMMITTEE

During the year, the Curriculum Committee considered many revisions and additions to the present curriculum. Its recommendations are briefly summarized below.

1. Undergraduate Curricula

a. Extensive revisions of the undergraduate curricula in German, Philosophy, and Mathematics were approved. The Committee approved 13 and 15 new courses, respectively, in the recently established departments of Afro-American Studies and Hispanic Languages and Literature. Instruction in Hebrew, Arabic, and Armenian under the aegis of the Classics Program was approved.

b. The Committee reviewed and approved 190 new courses for undergraduate, 123 of these generated by the faculty of Humanities and Fine Arts. The latter group includes 17 revisions of existing courses with the introduction of 12 new courses or modifications which expand the work of one semester into a two-semester sequence. Twenty-nine new courses came from the faculty of Social and Behavioral Sciences, including three revisions and one expansion from one to two semesters. The remaining thirty-eight new courses which were approved originated in the faculty of Natural Sciences and Mathematics. Of these seventeen were revisions of existing courses with one addition as a consequence of expanding the work of one semester into two.

c. The deletion of twelve courses was approved during the year. Thus

the actions of the Committee resulted in an increase of 141 courses to the undergraduate curriculum of the College plus approval of significant revision of thirty-seven existing courses. Action on eleven proposals was deferred.

2. Graduate Curricula

Fifty new graduate courses were proposed, twenty by the faculty of humanities and Fine Arts, twenty-three by the Social and Behavioral Sciences faculty, and seven by the Natural Sciences and Mathematics faculty. These course proposals were reviewed by the Deans and transmitted to the Graduate School Curriculum Committee without prior review by the College Curriculum Committee.

C. C.A.S.I.A.C. Report (College of Arts & Sciences Information and Advising Center)

During the year 1970-71 CASIAC again encountered an increase in essentially all areas. The most significant increase has been noted in the overall use of the facility by Arts and Sciences students. Most of the requests for information or advice have been handled by Mrs. Robinson and her staff, but many more students than ever before had to see one of the Deans. In consequence, Deans Livingston and Stephen Allen together handled over 3,000 student requests.

This year saw an initial slight downturn in the number of freshmen selecting the undefined major classification, CAS. Most of those with CAS designation define their educational goals and select a major in two to four semesters, but some few still remain CAS into their junior year. A summary of CAS students follows:

	June 1970	June 1971
Class '72	270	35
Class '73	1,050	425
Class '74	850	920

The number of 1974 freshmen initially selecting CAS designation was relatively lower than it had been for 1973 freshmen; however, that initial low number increased during their first year, going from 850 to 920. Thus about half of all freshmen continue to delay the selection of a departmental major.

CASIACs role in summer counseling has again increased. We anticipate that improved curricular information and advice provided our incoming freshmen will pay real dividends by getting students off to a good start. CASIACs success in the summer orientation program is completely dependent upon support from competent faculty and student advisors.

Beginning in the fall of 1970 and for the first time since its inception in the fall of 1965, the Office of the Assistant Deans became an integrated part of CASIAC. Ellen Snyder continues to keep the records on all students whose majors are within the College of Arts and Sciences and to check the records of each graduating class for fulfillment of the College graduation requirements, notifying seniors of their deficiencies in this area, conferring with them whenever necessary, and arranging appointments for them with an academic Dean if the problems call for an exception to a rule. In the Class of 1970, for example, a total of 1,477 seniors

was graduated from the College of Arts and Sciences (not counting those with BFA and BMUS degrees). This means that almost twice that number of senior records were checked that year to determine the ones who qualified. Mrs. Snyder continues to advise all major students within the College of Arts and Sciences who inquire as to their standing in relation to the fulfillment of the College requirements.

CASIAC looks forward to expanded activities next year under its new director.

D. OVERSEAS PROGRAMS

1. Anthropology Field Training Program in the West Indies

Three undergraduate and seven graduate students under the direction of Professor Thomas M. Fraser spent the summer of 1970 in the West Indies. An orientation and evaluation session, which included conferences with prominent government officials and citizens as well as with American and British sociologists conducting research there, placed the student projects in perspective. The purpose of the program was twofold: to expose students to the personal adjustments necessary over prolonged independent research; and to provide experience in collecting primary ethnographic data. Both aims were successfully achieved. Those involved in field projects, which included analyses of folklore, play behavior, women's roles, employment patterns, and kinship influences, felt some cultural shock. They had not expected the feelings of loneliness and isolation engendered by a radically different culture. The warm rapport they established with the citizens, however, was the reward gained by their conscientious efforts.

2. The Bologna Summer School Program

Professor Howard H. Quint and 64 students spent the summer of 1970 in Bologna, Italy. Excursions were made to many of the main cultural centers, such as Florence, Ravenna, Rome, Pisa, Venice, where architecture, art, and culture supplemented classroom work. Professor Benzason's course on Italian music, for example, gained credence from a performance of Carmen at the Coliseum in Verona.

3. Freiburg, Germany Program

a. Summer Institute

Professor Albert M. Reh and twelve students spent five weeks at Freiburg University in Germany. Of special value was the close association of the students with their German counterparts as well as with the director and staff. Besides courses in the language and nineteenth and twentieth century literature, scenic tours to Switzerland, the Black Forest, Lake Constance, and Meerburg Castle were arranged. The urban centers of Strassbourg, Colmar, and Ronchamps, France were also visited. Highlight of the Program was attendance at the Passion Play festival at Oberammergan and the Bavarian Baroque churches.

b. Academic Year

Professor Lawrence Ryan of the German Department served as Director of the Program and taught one course each semester. Others participating in the Program from the Amherst campus were Professors Gerard Braunthal, Political Science the first semester, and Bernard Spivak of the English Department the second semester. Each taught two courses. Professor Aho of the English Department spent the entire year teaching under a faculty exchange arrangement with the University of Freiburg.

Headquarters for an anthropological field program were established at the University of Freiburg. Professor Joel Halpern spent the academic year there lecturing and supervising field research for two students.

4. Madrid Summer Seminar

A group of thirty-four students were chaperoned by Blanche DuPuy for the 1970 summer program in Madrid, where they attended classes at the Institute International. Supplementary lecture series were reduced to two on the Spanish Renaissance and Flamenco music given by Rafael Benedito who also served as guide to an excellent performance at La Zambra. Two overnight trips took the participants to Avila/Salamanca and Burgos, and day trips gave them an opportunity to see Segovia, Manzanares el Real and El Pardo. Many students also travelled on their own while others took advantage of the pre-arranged museum tours and theatrical performances in Madrid. As always, the most gratifying result of the tour was the intellectual lift experienced by the students, who returned not only with an improved grasp of the language but with a new understanding of the culture that produced it, of the literature and art that express that culture's ideals and demonstrate its achievements and failures.

5. Oxford Summer Seminar

Under the guidance of Dr. Ernest H. Hofer, 121 students participated in the Oxford Summer Program in England. The activities covered a wide spectrum, from the performances of Hamlet and the Royal Ballet's Cinderella to a concert by the "Who". Interspersed were tours to various literary shrines--Shakespear's home in Stratford, Byron's Newstead Abbey--and the mining towns that form the setting for D. H. Lawrence's Sons and Lovers. Course work was rigorous and varied, yet was planned to allow enough freedom for many individual out-of-class activities. The result for the students, once again, has been a deeper appreciation of their own literary heritage and the English culture.

6. Programs in France

Professor Seymour S. Weiner successfully guided the Pau Summer Program in 1970. Both graduate and undergraduate participants heard lectures from faculty members of Pau, Bordeaux, and Toulouse Universities. About twenty advanced students in French studies went to Caen and a few studied in Grenoble or Paris.

E. OTHER SPECIAL PROGRAMS

1. Washington Summer Internship Program

The Department of Government initiated a Washington summer internship program for 1971. Stanley Bach and Eric Einhorn solicited the participation of Massachusetts members of the Congress and of a variety of executive departments and agencies. Applications were also solicited and screened from all interested undergraduate students. As a result of their efforts, at least five students received internships, two of which will be salaried. Tentative plans are now being made to expand this program for the summer of 1972 with the goals of seeking out a wider range of internship opportunities in Washington and of achieving more effective university-wide coordination.

2. Communication Disorders Clinic

The Communication Disorders Clinic is maintained as a training, research and service center. Faculty and students (under supervision) provide speech and hearing testing, training and therapy to clients of the university community and the Commonwealth of Massachusetts. Under the directorship of a new faculty member, Professor Jay Melrose, the clinic has increased the size and scope of its activities. During 1970-71, 367 hearing tests were conducted; 61 clients received aural rehabilitation; 155 students were given supervisory assistance. Members of the clinic staff also provided screening and testing of students at Carew Street School, Austine School for the Deaf and the Head Start Program in Springfield; consultant help at Belchertown State School, and Mercy Hospital in Springfield; and supervision of off-campus clinic practicums in Amherst, Northampton, and Holyoke.

3. NSF Development Grant for Psychology

In the spring of 1970, the National Science Foundation awarded one of five national grants to the Psychology Department. This is a social science department development grant of $582,000 for a three year period beginning April 1, 1971. The request, outlined and submitted by Professor Cy Berger and Stanley Moss, was based on the need to attract, first of all, more graduate students with quality academic backgrounds and, as a hopeful consequence, a commensurate faculty. The largest portion of the money, therefore, will be spent to expand the program for graduate research assistants, allowing them to test and mature their special interests before entering the classroom. At the same time, doctoral fellowships will also increase in number, permitting those who are working on their dissertations to engage in concentrated research. The remainder of the money will provide for faculty research salaries during the summer, faculty and student travel expense to professional meetings, guest lecturers, technicians for the expanded facilities such as a computer programmer and electronics and animal technicians, a departmental librarian, and secretaries.

4. Geology Department Special Programs

a. Brooklyn Career Opportunities Program. The Department of Geology

participated in the Brooklyn Career Opportunities Program of the Center for Urban Education by offering a course in elementary geology to about 200 adult teacher's aides, most of whom live in the Bedford-Stuyvesant and Brownsville sections of Brooklyn, New York. Six geologists flew to New York City one day each week during the spring semester, with smaller groups flying down three or four extra times for review sessions. The geology course, financed through the Model Cities Program of the Department of Health, Education, and Welfare, is part of the required science background for a B.S. in Elementary Education that the people in Brooklyn hope to obtain from the University of Massachusetts over a four year period. Participating on a regular basis were Professors Charles Pitrat and George McGill, and graduate students Larry Gerahain, Stewart Farrell, Vincent Kinney, Victor Goldsmith, and S. Eugene Rhodes.

b. Extraterrestrial Studies. Four staff members in the Department of Geology are actively involved in extra terrestrial studies. Professor D.U. Wise, who is studying lunar fracture systems, is serving on several important selection committees that determine the course of Lunar and Martian studies for NASA and also on the National Academy of Sciences space priorities committee. Professor G.E. McGill is studying surface features, particularly craters, ring structures, and rilles, on the Moon and on Mars. McGill will be associated with the U.S. Geological Survey, Branch of Astrogeologic studies, in Menlo Park, California, and will work on initial geological analysis of Mariner 9 pictures of Mars. Professor H.T.U. Smith is studying eolian features on Mars and comparing them to terrestrial features. Professor S.E. Haggerty is studying the oxide mineralogy of lunar samples obtained from Apollo XI, XII, and XIV.

These geologists comprise the most varied group of extra terrestrial geological researchers in New England and one of the strongest extra-terrestrial geologic teams associated with any university in United States. We now have a course program and research capability that enables us to offer graduate degrees in extraterrestrial geology.

c. The establishment of the Coastal Research Center, directed by Professor M.O. Hayes, is the culmination of seven years' work on coastal areas in New England. An informal group of students working with Professor Hayes, known for several years as the Coastal Research Group, was finally given official recognition by the University of Massachusetts at Amherst. A wide and varied program of coastal studies, ranging from estuaries to dunes, beaches, and nearshore bottom deposits, has been carried out from Maine to Long Island and on a long stretch of the coast of southeast Alaska. Professor Hayes and his group, working for advanced degrees in geology with the Department of Geology, have published four titles in the Departmental Contribution series and have given or published a great many papers at professional meetings and in geological journals.

Now that the Coastal Research Center is a reality, Professor Hayes and his students look forward to more interdisciplinary contact with other groups on campus (Civil Engineering and Botany) and to geologists and

scientists on other campuses. The research contracts granted to Professor Hayes to the present have supported many graduate students in the past seven years. This year the Coastal Research Center is supporting five graduate students; twenty undergraduates and graduates were supported during the summer of 1971.

5. Mathematics/Statistics Departments

a. Conference on Transfortation Groups. During the period of June 6-18, 1971, the Mathematics Department (supported by an NSF grant) hosted a conference on Transformation Groups. A large number of leading researchers in this and allied fields were invited to participate the aim being to collect and discuss the results and ideas of the past several years since the first such conference on Transformation Groups at Tulane in 1967.

b. Teacher Training Program. The Mathematics Department instituted a Teacher-Training Program this year which included a two day orientation program for all graduate teaching assistants, providing each of them with an advisor. His duty is to provide guidance to the teaching assistant under him and to evaluate his classroom performance, both services proving quite beneficial. The teaching assistants who were having trouble were quickly identified and were given additional help. Much unwarranted criticism of the assistants, as a result, was countered. The advisor's evaluations, together with the student-questionnaire data, gave a balanced appraisal of each of the assistant's effectiveness.

6. Zoology Department

a. Teacher Training Program. The Zoology Department instituted a one credit course (850) last year under the direction of Professor Grace Rollason that is required for all graduate teaching assistants with no previous classroom experience and optional for others. By video taping the initial efforts of these graduate students and comparing them to previously taped sessions of established assistants, a basis is prepared for constructive criticism of his techniques. From there, discussions evolve to clarify appropriate procedures for a variety of classroom situations, such as small and large lecture sections, laboratories, and tutoring as well as such problems as examinations and experiments. In addition, a number of meetings are reserved for lectures on the qualities of an institution that would make it more attractive to the prospective professional: membership in the Association of University Professors, a full-time ombudsman, academic freedoms, and protection of legal rights.

b. Research Participation for College Teachers of Zoology. The Zoology Department provided a research participation program, which was supported by a National Science Foundation grant of $13,350, during the summer of 1971 for three college teachers from other institutions. Under the direction of Professor L.M. Bartlett, they were: Mr. Norman Garrison, Madison College, Harrisburg, Va.; Dr. Robert Bristol, Mesa Community College, Mesa, Arizona; and Dr. Russell Camp, Gordon College, Wenham, Massachusetts. The aim of the program is to provide teachers of zoology from small schools with limited resources the opportunity to engage in research at a major research center.

F. FUTURE PLANS AND NEEDS

The future plans and needs of the College are closely tied to full implementation of the decision to divide the College into three Faculties, each with its own Dean, but with a common curriculum. Previous parts of this report reveal that there has been continuing growth and innovation, but rapid strides can be anticipated when each broad area of learning has its own Dean who then will have more time to consider the needs and opportunities within the area of his own specialty.

Inadequate space continues to be a limiting factor for most areas of the College. Completion of the tower of the Graduate Research Center, Tobin Hall, and the Fine Arts Building will relieve the crowded situation, but space problems will not be satisfied. Growth of several science departments, particularly Biochemistry, Geology, Physics, and Zoology, is severely limited by insufficient space, and new quarters are required for Mathematics. The Department of Anthropology has grown dramatically since its creation in September, 1969 but its quarters in a portion of Machmer Hall are inadequate for its present staff and teaching needs. Facilities for the Department of Art will remain inadequate even after the completion of the Fine Arts Building; space for sculptors and for more than a very few other creative artists was not provided in the plans for the building. Finally, faculty and teaching assistants in the Humanities are literally jammed into Herter Hall and a few offices in Thompson, Machmer and South College. Inadequate office space forces these people to work at home where they are unavailable to students except during stated office hours.

Money is a continuing problem, particularly the absence of discretionary funds which might be used for a variety of innovative programs or might provide the means whereby the Deans could respond to unforeseen or unusual opportunities.

TABLE 1

PROFESSIONAL POSITIONS (FTE) FILLED BY RANK

(Text page 9)

	1968	1969	1970
Administration:			
Dean	1	1	1
Vice-Dean	1	1	.5
Associate Dean	2	2	1
Assistant Dean	1.5	1.5	1.5
Totals	5.5	5.5	4.0
Faculty:			
Professors	141.7 (21.2%)	170.8 (23.2%)	187.0 (23.8%)
Associate Professors	143.0 (21.4%)	179.7 (24.4%)	207.0 (26.4%)
Assistant Professors	272.3 (40.7%)	279.0 (37.9%)	281.3 (35.8%)
Instructors	91.4 (13.6%)	84.0 (11.4%)	86.9 (11.1%)
Lecturers	19.6 (2.9%)	21.0 (2.8%)	22.3 (2.8%)
Totals	668.0	734.5	784.5
Non-Teaching:			
Staff Associates	2	2	4
Staff Assistants	7	10	8
Professional Technical	1	1	1
Totals	10	13	13
Teaching Assistants[a]:	472	545	608
Postdoctoral Research Associates (Not on State funds):			
Biochemistry	3	3	4
Chemistry	14	12	10
Mathematics	-	-	18
Microbiology	2	2	1
Psychology	1	1	1
Physics and Astronomy	11	5	6
Zoology	9	8	12
Totals	40	31	52

Note:

(a) This FTE figure was obtained by dividing the total allocation for T.A.'s by the budgeted average stipend. The appropriate amounts were:

1968 - $1,274,400 allocated; average stipend $2,700
1969 - $1,635,000 allocated; average stipend $3,000
1970 - $1,945,000 allocated; average stipend $3,200

TABLE 2

NUMBER OF FACULTY POSITIONS (FTE) FILLED BY
DEPARTMENT, FACULTY, AND RANK: FALL SEMESTER

(Text page 9)

	1968						1969						1970					
	(1)	(2)	(3)	(4)	(5)	Total	(1)	(2)	(3)	(4)	(5)	Total	(1)	(2)	(3)	(4)	(5)	Total
HUMANITIES AND FINE ARTS:																		
Afro-American Studies	-	-	-	-	-	-	-	-	-	-	-	(a)	-	1	3	1.0	2.9	7.9
Art	5.5	6	6	4	1	22.5	5	7	9	3	1	25	7	8	12	4	-	31
Comparative Literature	1	-	1	2	-	4	1	-	2	3	-	6	1	-	4	2	-	7
English	18.5	20	37.6	9.9	3.5	89.5	25	22	38.6	12	2.4	100	27	25	37.6	11.6	2.3	103.5
French, Italian and Classics (b)	10	11	15	18	1	55	7	9	14	7	1	38	4	13	10	10	2	39
Germanic Languages	4	6	7	6	-	23	5	5	9	4	-	23	5	6	7	4.5	-	22.5
Hispanic Languages	-	-	-	-	-	-	6	3	7	5	1	22	6	2	5	6	1	20
History	8	11	21	9	.8	49.8	12	12	20	5	1.8	50.8	10	17	13	3	.8	43.8
Linguistics	-	1	1	-	-	2	-	1	2	-	-	3	-	1	4	1	-	6.0
Music	3	2	9	4	2	20	3	2	12	4	1	22	3	4	12	3	2	24
Philosophy	4	4	5	-	1	14	6	4	5	-	-	15	6.5	4	4	-	-	14.5
Slavic Languages	-	3	1	1	1	6	1	3	1	1	1	7	1.5	2	2	1	1	7.5
Totals	54	64	103.6	53.9	10.3	285.8	71	68	119.6	44	9.2	311.8	71	82	113.6	47.1	12	326.7
SOCIAL AND BEHAVIORAL SCIENCES:																		
Anthropology	-	-	-	-	-	(c)	2	3	5	-	-	10	2	3	7	1	-	13
Asian Studies	-	-	-	-	-	-	-	1	-	-	-	1	-	1	-	2.8	-	3.8
Economics	7	3	12	1	-	23	7	3	12	2	2	26	7	4	13	3	-	27
Government (d)	11	6	13	2	1	33	11	9	11	2	1	34	12.5	12	7	3	-	34.5
Psychology	8.7	7	17.8	-	-	33.5	9.8	10.7	19	-	1	40.5	11	15	22.5	-	-	48.5
Sociology	6	10	11	1	-	28	8	12	3	1	-	24	7	14	3	4	-	28
Speech	6	3	20	14	-	43	8	5	20	13	-	46	8	6	21	10	1	46
Totals	38.7	29	73.8	18	1	160.5	45.8	43.7	70	18	4	181.5	47.5	55	73.5	23.8	1	200.8
NATURAL SCIENCES AND MATHEMATICS:																		
Biochemistry	1	3	2	-	.5	6.5	1	3	2	-	.5	6.5	1	3	2	-	1	7
Botany	6	5	6.7	1	-	18.7	6	5	7.7	-	-	18.7	7	4	6.7	1	1	19.7
Chemistry	10	6	13	6	-	35	11	10	10	6	-	37	13	11	12	5	-	41
Geology/Geography	3	7	6	1	-	17	4	9	4	2	-	19	6	8	5	2	-	21
Mathematics/Statistics	11	11	28.2	10.5	7.8	68.5	13	12	32.7	12	7.3	77	19.5	11	36.5	8	7.3	82.3
Microbiology	2	2	5	-	-	9	2	3	5	-	-	10	2	3	6	-	-	11
Physics/Astronomy	8	12	20	-	-	40	10	20	16	-	-	46	12	19	16	-	-	47
Zoology	8	4	14	1	-	27	7	6	12	2	-	27	8	10	10	-	-	28
Totals	49	50	94.9	19.5	8.3	221.7	54	68	89.4	22	7.8	241.2	68.5	69	94.2	16	9.3	257
College Totals	141.7	143	272.3	91.4	19.6	668	170.8	179.7	279	84	21	734.5	187	207	281.3	86.9	22.3	784.5

Columns (1), (2), (3), (4) and (5) indicate the number of positions at the rank of Professor, Associate Professor, Assistant Professor, Instructor and Lecturer, respectively.

Notes:

(a) No actual allocation of positions this year (1969-70). Appointments were attached to the English Department for bookkeeping purposes. (All positions used were borrowed.)
(b) Faculty positions in Hispanic Languages are included in those listed for French, Italian and Classics for the year 1968.
(c) Anthropology and Sociology were a single department prior to the 1969-70 academic year.
(d) The Bureau of Government Research is a part of the Government Department.

TABLE 3

PROFESSIONAL PERSONNEL ACTIONS

(Text page 9)

	1968-69	1969-70	1970-71
Promotions	45	66[a]	55[a]
Tenure Appointments	36	50	49
Resignations and Terminations	50	44	58
Retirements	2	5	5
Deceased	-	3	2
Merit Increases	519	569[b]	622
Sabbatical Leaves taken during the academic year	24	30[c]	35[c]
Leaves of Absence without pay taken during the academic year	27	25[d]	31[d]

Notes:

(a) One effective September 1, 1970; five effective September 1, 1971.

(b) Six effective September 1, 1970.

(c) Fourteen full year and 16 one semester in 1969-70; thirteen full year and twenty-two one semester only in 1970-71.

(d) Fifteen full year and ten one semester only in 1969-70; nineteen full year and 12 one semester only in 1970-71.

TABLE 4

NON-PROFESSIONAL POSITIONS BY RANK

(Text page 10)

Grade		1967-68*	1968-69*	1969-70*	1970-71**
	Secretarial:				
(11)	Head Clerk	-	-	2	4
(09)	Principal Clerk	7	9	12	15
(07)	Senior Clerk Stenographer	21	21	22	27
(06)	Senior Clerk Typist	13	14	14	19
(04)	Junior Clerk Stenographer	36	37	37	31.5
(03)	Junior Clerk Typist	6	9	11	22
	Totals	83	90	98	118.5
	Non-Secretarial (Technical):				
(13)	Statistician	-	-	1	1
(13)	Junior Chemist	-	-	1	1
(12)	Technical Specialist	3	3	3	3
(12)	Principal Storekeeper	1	1	1	1
(11)	Machinist Foreman	1	1	-	-
(10)	Storekeeper	3	3	3	4
(10)	Electronic Technician	4	4	4	4
(10)	Senior Technical Assistant	-	-	1	2
(10)	Machinist	2	2	2	2
(10)	Carpenter	1	1	1	1
(09)	Laboratory Technician	1	-	1	1
(08)	Technical Assistant	17	17	20	20
(07)	Mechanical Handyman	1	1	1	1
(05)	Animal Room Attendant	1	1	1	1
(05)	Laboratory Assistant	9	9	8	9
(03)	Institutional Domestic Aid	1	1	1	1
	Totals	45	44	49	52

Notes:

(*) Fall of each indicated year.

(**) As of June 30, 1971.

TABLE 5

FACULTY POSITIONS AND SECRETARIAL
POSITIONS (FTE Basis) BY DEPARTMENT AND FACULTY 1970-71

(Text page 10)

	Faculty Positions	Sec. Positions	Faculty/ Sec. Ratio	Highest Ranking Position
HUMANITIES AND FINE ARTS:				
Afro-American Studies	7.9	1	7.9	Principal Clerk
Art	31	4.5	6.9	Sr. Clerk Steno.
Comparative Literature	7	1	7.0	Sr. Clerk Typist
English	103.5	11	10.4	Head Clerk
French, Italian and Classics	39	4	9.7	Principal Clerk
Germanic Languages	22.5	3	7.5	Sr. Clerk Steno.
Hispanic Languages	20	3	6.7	Sr. Clerk Steno.
History	43.8	5	8.7	Principal Clerk
Linguistics (a)	6	1	6.0	Jr. Clerk Typist
Music	24	2	12.0	Principal Clerk
Philosophy	14.5	1.5	9.7	Sr. Clerk Typist
Rhetoric	-	1	-	Sr. Clerk Steno.
Slavic Languages	7.5	1	7.5	Jr. Clerk Steno.
Total	326.7	39	9.1	
SOCIAL AND BEHAVIORAL SCIENCES:				
Anthropology	13	2	6.5	Sr. Clerk Steno.
Asian Studies (a)	3.8	-	-	-
Economics	27	5	5.4	Head Clerk
Government (b)	34.5	5.5	6.3	Principal Clerk
Psychology	48.5	9	5.4	Principal Clerk
Sociology	28	4	7	Sr. Clerk Steno.
Speech	46	6	7.7	Principal Clerk
Total	200.8	31.5	6.3	
NATURAL SCIENCES AND MATHEMATICS:				
Biochemistry	7	1	7	Jr. Clerk Steno.
Botany	19.7	5	3.9	Sr. Clerk Steno.
Chemistry	41	7	5.8	Principal Clerk
Geology/Geography	21	3.5	6	Principal Clerk
Mathematics/Statistics	82.3	7	11.6	Principal Clerk
Microbiology	11	1.5	7.4	Sr. Clerk Steno.
Physics/Astronomy	47	7	6.7	Head Clerk
Zoology	28	5	5.6	Principal Clerk
Total	257	37	6.9	
Departmental Total	784.5	107.5	7.5	
DEANS' OFFICE:	5	11[c]	-	Head Clerk
Grand Total	789.5	118.5	6.7	

Notes:

(a) The Departments of Linguistics and Asian Studies share the same secretarial position.

(b) The Bureau of Government Research is a part of the Government Department.

(c) The secretary to the Pre-Medical Advisory Committee and one unassigned secretarial position are included among those assigned to the Deans' Office.

TABLE 6

RATIOS OF FACULTY POSITIONS TO
SECRETARIAL POSITIONS AND TO TECHNICAL POSITIONS[a]

(Text page 10)

	1967-68*	1968-69*	1969-70*	1970-71**
Faculty positions	606.0	668.0	734.5	784.5
Secretarial positions	77.0	83.5	89.0	107.5
Faculty/Secretarial ratio	7.9	8.0	8.2	7.3
Faculty positions	606.0	668.0	734.5	784.5
Technical positions	45.0	44.0	49.0	60.0
Faculty/Technical ratio	13.5	15.2	15.0	13.1

Notes:

(a) Computations based on total faculty positions (FTE) and do not include personnel in the Deans' Office.

(*) Fall of each indicated year.

(**) As of June 30, 1971.

TABLE 7

COMPARATIVE ENROLLMENTS (HEAD COUNT)
AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST
BY CLASSES AND BY COLLEGES (September of each year)

	1955	1958	1961	1964	1965	1966	1967	1968	1969	1970
Four-year Undergraduates:										
By Class:										
Freshmen	1,088	1,366	1,918	2,592	2,622	2,954	3,040	3,188	3,820	3,693
Sophomores	899	1,126	1,463	2,135	2,516	2,904	3,061	3,266	3,382	4,038
Juniors	897	914	1,323	1,781	2,225	2,602	2,964	3,235	3,695	3,969
Seniors	744	861	980	1,469	1,572	1,971	2,509	2,949	3,346	3,425
By School:										
COLLEGE OF ARTS AND SCIENCES	1,721	2,043	3,116	4,647	5,060	5,776	6,335	6,858	8,092	8,652
Total, All other schools	1,907	2,224	2,568	3,330	3,875	4,655	5,239	5,780	6,151	6,473
Agriculture	324	277	341	395	487	620	705	762	837	928
Business Administration	506	507	503	678	831	1,043	1,244	1,396	1,432	1,367
Education	(a)	274	426	607	695	840	862	972	1,213	1,371
Engineering	792	878	836	898	394	939	969	1,018	1,014	998
Home Economics	183	122	114	194	268	369	458	501	479	546
Nursing	37	63	102	176	203	255	287	313	320	365
Physical Education	65	98	246	278	367	467	589	692	741	778
Public Health	-	-	(a)	104	109	122	125	126	115	114
No Major	-	-	-	-	21	-	-	-	-	6
Total, Four-year undergraduates	3,628	4,267	5,684	7,977	8,935	10,431	11,574	12,638	14,243	15,125
Stockbridge Total	338	348	394	484	516	544	583	598	636	633
Graduate School:										
COLLEGE OF ARTS AND SCIENCES	(b)	(b)	(b)	(b)	1,131	1,325	1,461	1,527	1,787	2,029
Total, All other schools	(b)	(b)	(b)	(b)	1,109	1,119	1,374	1,580	2,014	2,435
Total, Graduate School	337	568	845	1,846	2,240	2,444	2,835	3,107	3,801	4,464
Special and/or Non-Classified Total	38	88	96	190	168	190	210	209	207	240
UNIVERSITY TOTAL	4,341	5,271	7,019	10,497	11,859	13,679	15,202	16,552	18,887	20,462

Notes:

(a) The Schools of Education and Public Health were included in Arts and Sciences until 1957 and 1963 respectively.

(b) A breakdown of figures for the Graduate School was not available before 1965.

TABLE 8

COMPARATIVE ENROLLMENTS IN PERCENTAGES
AT THE UNIVERSITY OF MASSACHUSETTS, AMHERST
BY CLASSES AND BY COLLEGES (September of each year)

	1955	1958	1961	1964	1965	1966	1967	1968	1969	1970
UNIVERSITY TOTAL - 100% equals	4,341	5,271	7,019	10,497	11,859	13,679	15,202	16,552	18,887	20,462
By Class:										
Freshmen	25.1	25.9	27.3	24.7	22.2	21.6	20.0	19.3	20.2	18.1
Sophomores	20.7	21.4	20.8	20.3	21.2	21.2	20.1	19.7	17.9	19.7
Juniors	20.7	17.3	18.9	17.0	18.7	19.0	19.5	19.5	19.6	19.4
Seniors	17.1	16.4	14.0	14.0	13.3	14.4	16.5	17.8	17.7	16.7
Total, Four-Year Undergraduate	83.6	81.0	81.0	76.0	75.4	76.2	76.1	76.3	75.4	73.9
Stockbridge Total	7.8	6.6	5.6	4.6	4.3	4.0	3.8	3.6	3.5	3.1
Graduate School:										
COLLEGE OF ARTS AND SCIENCES (%/graduates)	-	-	-	(a)	50.5	52.7	51.5	49.1	47.3	45.5
Total, All Other Schools (%/graduates)	-	-	-	(a)	49.5	47.3	48.5	50.9	52.7	54.5
Total, Graduate School (%/University)	7.8	10.8	12.0	17.6	18.9	18.4	18.7	18.8	20.0	21.8
Special and/or Non-Classified Total	.8	1.6	1.4	1.8	1.4	1.4	1.4	1.3	1.1	1.2
FOUR-YEAR UNDERGRADUATE TOTAL - 100% equals	3,628	4,267	5,684	7.977	8,935	10,431	11,574	12,638	14,243	15,125
By School:										
COLLEGE OF ARTS AND SCIENCES	47.4	47.8	54.8	58.2	56.6	55.3	54.7	54.3	56.7	57.2
Total, All Other Schools	52.6	52.2	45.2	41.8	43.4	44.7	45.3	45.7	43.3	42.8
Agriculture	8.9	6.5	6.0	5.0	5.5	5.9	6.1	6.0	5.9	6.1
Business Administration	14.0	11.9	8.9	8.5	9.3	10.1	10.7	11.0	10.1	9.0
Education	(b)	6.4	7.5	7.6	7.8	8.0	7.4	7.7	8.5	9.1
Engineering	21.9	20.6	14.7	11.3	10.0	9.0	8.4	8.0	7.1	6.6
Home Economics	5.0	2.9	2.0	2.4	3.0	3.5	4.0	4.0	3.4	3.6
Nursing	1.0	1.6	1.8	2.2	2.3	2.5	2.5	2.5	2.3	2.4
Physical Education	1.8	2.3	4.3	3.5	4.1	4.5	5.1	5.5	5.2	5.1
Public Health	-	-	(b)	1.3	1.2	1.2	1.1	1.0	.8	.8
No Major	-	-	-	-	.2	-	-	-	-	.1

Notes:

(a) A breakdown for figures in the Graduate School not available before year indicated.

(b) The Schools of Education and Public Health were included in Arts and Sciences until 1957 and 1963, respectively.

TABLE 9

INSTRUCTIONAL STUDENTS[a]
BY DEPARTMENT AND FACULTY (Fall Semester)

(Text page 13)

	FTE Students		Instr. Students	Instr. Students 1970	
	1968	1969	1970	Under-graduate	Graduate
HUMANITIES AND FINE ARTS:					
Afro-American Studies	-	21	75	75	-
Art	320	420	480	383	97
Comparative Literature	82	92	170	150	20
English	1,752	1,789	1,834	1,598	236
French, Italian and Classics	500	413	482	429	53
Germanic Languages	290	231	177	151	26
Hispanic Languages	245	185	203	177	26
History	952	920	917	764	153
Linguistics	10	19	38	20	18
Music	214	169	176	153	23
Philosophy	264	270	367	334	33
Slavic Languages	50	53	57	47	10
Subtotal	4,679	4,582	4,976	4,281	695
SOCIAL AND BEHAVIORAL SCIENCES:					
Anthropology	187	285	404	362	42
Asian Studies	4	7	23	23	-
Economics	398	440	471	385	86
Government	482	451	604	512	92
Psychology	975	1,203	1,658	1,434	224
Sociology	750	855	882	816	66
Speech	469	532	585	512	73
Subtotal	3,265	3,773	4,627	4,044	583
NATURAL SCIENCES AND MATHEMATICS:					
Biochemistry	48	63	74	35	39
Botany	308	342	360	310	50
Chemistry	570	533	581	428	153
Geology/Geography	280	259	274	229	45
Mathematics/Statistics	1,325	1,295	1,207	1,076	131
Microbiology	117	101	147	99	48
Physics/Astronomy	478	522	511	406	105
Zoology	640	537	568	491	78
Subtotal	3,766	3,652	3,723	3,074	649
Honors Program	-	22	-	-	-
COLLEGE TOTALS	11,710	12,029	13,326	11,399	1,927

Notes:

(a) Both "FTE" and "instructional students" are statistical entities equivalent to either 15 undergraduate or 8 graduate credits. They differ in that credits earned by graduate students in introductory courses were divided by 15 in the determination of "FTE" students (1968 and 1969) whereas all credits earned by graduate students in any course were divided by 8 in the determination of "instructional students" (1970).

TABLE 10

STUDENT-TO-FACULTY RATIOS (September 1970)
WITH AND WITHOUT TEACHING ASSISTANTS

(Text page 13)

	Instr. Students (a)	Fac.	S/F Ratio	TA Equiv. (b)	Fac. Plus TA's	S/F Plus TA's
HUMANITIES AND FINE ARTS:						
Afro-American Studies	75	7.9	9.49	-	7.9	9.4
Art	480	31	15.48	6.2	37.2	12.9
Comparative Literature	170	7	24.30	1.9	8.9	19.1
English	1,834	103.5	17.71	27.7	131.2	13.98
French, Italian and Classics	482	39	12.36	6.6	45.6	10.57
Germanic Languages	177	22.5	7.87	5.7	28.2	6.28
Hispanic Languages	203	20	10.15	3.6	23.6	8.6
History	917	43.8	20.94	11.7	55.5	16.52
Linguistics	38	6	6.33	2.5	8.5	4.47
Music	176	24	7.33	2.3	26.3	6.69
Philosophy	367	14.5	25.31	4.6	19.1	19.21
Slavic Languages	57	7.5	7.60	.4	7.9	7.8
Subtotal	4,976	326.7	15.23	73.2	399.9	12.47
SOCIAL AND BEHAVIORAL SCIENCES:						
Anthropology	404	13	31.07	3.1	16.1	24.6
Asian Studies	23	3.8	6.05	-	3.8	4.8
Economics	471	27	17.4	6.8	34.5	13.65
Government	604	34.5	17.51	9.8	44.3	13.63
Psychology	1,658	48.5	34.18	18.6	67.1	24.71
Sociology	882	28	31.5	13.2	41.2	21.4
Speech	585	46	12.69	8.9	54.9	10.64
Subtotal	4,627	200.8	23.04	60.4	261.2	17.69
NATURAL SCIENCES AND MATHEMATICS:						
Biochemistry	74	7	10.6	2.8	9.8	7.6
Botany	360	19.7	18.27	7.2	26.9	13.38
Chemistry	581	41	14.17	24.3	65.3	8.9
Geology/Geography	274	21	13.05	8.3	29.3	9.35
Mathematics/Statistics	1,207	82.3	14.67	19.3	101.6	11.88
Microbiology	147	11	13.36	3.6	14.6	10.1
Physics/Astronomy	511	47	10.87	24.5	71.5	7.15
Zoology	568	28	20.29	16.6	44.6	12.74
Subtotal	3,723	257	14.48	106.6	363.6	10.24
COLLEGE TOTALS	13,326	784.5	16.9	240.2	1,024.9	13.00

Notes:

(a) Instr. student equals 15 student credit hours earned by undergraduates or 8 student credit hours earned by graduates.

(b) TA equivalent is an arbitrarily chosen figure; $9,600 of teaching assistant funds equals one faculty position.

TABLE 11

STUDENT MAJORS (HEAD COUNT)
BY DEPARTMENT AND FACULTY (Fall Semester)

(Text page 13)

	Undergraduate			Graduate			Totals		
	1968	1969	1970	1968	1969	1970	1968	1969	1970
HUMANITIES AND FINE ARTS:									
Afro-American Studies (b)	-	-	-	-	-	-	-	-	-
Art	139	208	286	67	69	94	206	277	380
Bachelor of Fine Arts	76	99	115	-	-	-	76	99	115
Comparative Literature	-	-	11	7	10	16	7	10	27
English	1,038	1,005	901	212	273	332	1,250	1,278	1,233
Journalism	102	99	93	-	-	-	102	99	93
French (a)	188	191	128	(48)	76	93	(236)	267	221
Italian	-	3	6	-	-	-	-	3	6
Latin/Classics	14	16	14	24	2	-	38	18	14
Germanic Languages	60	42	38	58	64	53	118	106	91
Hispanic Languages (a)	65	86	77	(24)	37	47	(89)	123	124
History	639	637	586	96	131	154	735	768	740
Linguistics	-	-	-	1	15	17	1	15	17
Music	29	46	15	18	24	34	47	70	49
Bachelor of Music	34	31	58	-	-	-	34	31	58
Philosophy	54	54	59	45	33	46	99	87	105
Slavic Languages	30	36	32	3	8	16	33	44	48
Subtotal	2,468	2,553	2,419	579	742	902	3,071	3,295	3,321
SOCIAL AND BEHAVIORAL SCIENCES:									
Anthropology	72	98	125	-	36	42	72	134	167
Asian Studies (b)	-	-	-	-	-	-	-	-	-
Economics	160	179	165	59	57	72	219	236	237
Government	501	486	589	89	124	117	590	610	706
Psychology	539	729	1,002	125	143	163	664	872	1,165
Sociology	400	547	634	90	74	80	490	621	714
Speech	153	193	293	35	49	72	188	242	365
Subtotal	1,825	2,232	2,808	398	483	546	2,223	2,715	3,354
NATURAL SCIENCES AND MATHEMATICS:									
Biochemistry	24	42	46	26	20	26	50	62	72
Botany	31	40	34	47	40	41	78	80	75
Chemistry	185	150	121	121	134	134	306	284	255
Geology	94	81	76	38	44	55	132	125	131
Geography	-	-	17	-	-	-	-	-	17
Mathematics	466	450	406	87	86	89	553	536	495
Statistics	-	-	-	13	8	9	13	8	9
Microbiology	57	52	46	33	34	37	90	86	83
Physics	77	79	62	93	109	94	170	188	156
Astronomy	27	19	21	7	12	16	34	31	37
Zoology	444	357	347	73	75	80	517	432	427
Subtotal	1,405	1,270	1,176	538	562	581	1,943	1,832	1,757
Pre-Medical	42	41	33	1	-	-	43	41	33
Honors	-	-	218	-	-	-	-	-	218
C.A.S.I.A.C.	1,118	1,996	1,998	-	-	-	1,118	1,996	1,998
COLLEGE TOTALS	6,858	8,092	8,652	1,515	1,787	2,029	8,398	9,879	10,681

Notes:

(a) Figures enclosed in parentheses represent the estimated split of Romance Languages between French and Hispanic Languages.

(b) No major available at this time.

TABLE 12

UPPERCLASS MAJORS BY DEPARTMENT
AND FACULTY (Spring Semester)
(Text page 13)

	Head Count				Percent of Majors			
	1968	1969	1970	1971	1968	1969	1970	1971
HUMANITIES & FINE ARTS:								
Art	80	64	76	75	2.98	2.16	2.39	2.25
Bachelor of Fine Arts	29	61	80	66	.74	2.04	2.41	1.98
Comparative Literature	--	--	--	6	--	--	--	.18
English	541	616	597	548	20.08	20.61	17.98	16.44
Journalism	42	43	50	40	1.56	1.44	1.51	1.20
French	83	78	68	54	3.09	2.62	2.05	1.62
Italian	--	--	1	4	--	--	--	.12
Latin/Classics	2	6	11	9	.07	.20	.33	.27
German	32	26	21	18	1.41	.87	.63	.54
History	331	358	392	376	12.31	12.02	11.80	11.28
Music	5	7	2	3	.19	.23	.06	.09
Bachelor of Music	5	16	27	13	.19	.54	.81	.39
Philosophy	31	26	36	31	1.15	.87	1.08	.93
Slavic Languages	30	22	17	19	.82	.50	.51	.57
Spanish	30	22	30	37	1.11	.74	.90	1.11
Subtotal	1,241	1,345	1,408	1,299	46.10	45.00	42.40	38.97
SOCIAL & BEHAVIORAL SCIENCES:								
Anthropology	37	43	59	69	1.23	1.44	1.78	2.08
Economics	80	129	138	112	3.46	4.33	4.15	3.36
Government	284	269	279	304	10.57	9.02	8.40	9.12
Psychology	233	282	375	463	8.96	9.45	11.30	13.89
Sociology	190	250	362	371	7.60	8.48	10.90	11.13
Speech/Rhetoric	65*	25	24	11	2.56*	.84	.72	.33
Comm. Disorders	--	32	44	55	--	1.07	1.38	1.65
Mass Communication	--	8	29	41	--	.27	.87	1.23
Theater	--	15	25	27	--	.50	.75	.81
Subtotal	889	1,053	1,335	1,453	33.00	35.20	40.20	43.60
NATURAL SCIENCES & MATHEMATICS:								
Biochemistry	1	10	13	10	.04	.34	.39	.30
Botany	14	17	20	17	.52	.57	.60	.51
Chemistry	68	70	62	51	2.53	2.34	1.87	1.53
Geology	46	45	49	41	1.71	1.51	1.48	1.23
Geography	--	--	2	8	--	--	.06	.24
Mathematics	158	168	150	151	5.87	5.63	4.52	4.53
Microbiology	28	30	31	28	1.04	1.01	.93	.84
Physics	21	26	31	31	.78	.87	.93	.93
Astronomy	10	9	5	5	.37	.30	.15	.15
Zoology	147	182	155	140	5.47	6.10	4.67	4.20
Pre-Medical	70	35	37	28	2.60	1.17	1.11	.84
Subtotal	563	592	555	510	20.90	19.80	16.70	15.30
C.A.S.I.A.C.	1	-	23	71	.03	--	.69	2.13
COLLEGE TOTAL	2,694	2,990	3,321	3,333	100.0	100.0	100.0	100.0

Note: *Breakdown of figures unavailable before year indicated.

TABLE 13

DEGREES AWARDED

(Text page 20)

	1968-69	1969-70	1970-71
Bachelor of Arts	1,074	1,208	1,322
Bachelor of Science	278	315	232
Bachelor of Fine Arts	25	34	39
Bachelor of Music	-	12	13
Total Bachelors	1,377	1,569	1,606
Master of Arts	170	158	173
Master of Science	97	71	85
Master of Fine Arts	27	20	19
Master of Music	1	9	6
Total Masters	295	258	283
Ph. D.	94 (1)	100 (1)	137
GRAND TOTAL	1,766	1,927	2,026

(1) The breakdown by major departments is shown below:

Department:	1968-69	1969-70	1970-71
Anthropology	-	1	1
Biochemistry	4	5*	2
Botany	3	5	5
Chemistry	26	18*	20
Economics	2	3	8
English	7	12	21
French, Italian and Classics	-	2*	2
Geology	-	-	2
German	2	2*	2
Government	5	1	9
History	-	3	2
Linguistics	-	-	1
Mathematics	6	6	8
Microbiology	5	2	7
Philosophy	2	1*	1
Physics	3	3	6
Psychology	19	25	23
Sociology	-	5	7
Zoology	6	6*	10
Total	94	100	137

(*) One Five-College cooperative Ph. D. is included in each total.

TABLE 14

BOOKS AND MONOGRAPHS, BY DEPARTMENT AND FACULTY (1970-1971)

(Text page 19)

HUMANITIES AND FINE ARTS

Art:

Benson, Jack. Horse, Bird and Man. Amherst: University of Massachusetts Press, 1970. 182 pp.

Coughlin, Jack. Thirteen Irish Writers: Portrait Etchings with Text. Dublin: Dolmen Press, 1971.

Roskill, Mark. Van Gogh, Gauguin and the Impressionist Circle. London: Thames and Hudson, 1970.

English:

Clayton, John J. Saul Bellow: In Defense of Man. Bloomington, Indiana: University of Indiana Press, 1971. (Revised).

Edwards, Lee (editor). Alcuiu: A Dialogue, by Charles Brochden Brown. New York: Grossman Publishers, 1971. 120 pp.

Emerson, Everett H. Captain John Smith. New York: Twayne Publishers, 1971. 150 pp.

Farrell, Kirby. Cony-Catching. New York: Atheneum, 1971. 385 pp.

Gibson, Walker. The Play of Language. New York: Oxford University Press, 1971. 404 pp. (With Leonard F. Dean and Kenneth S. Wilson).

Junkins, Donald. And Sandpipers She Said. Amherst, Massachusetts: University of Massachusetts Press, 1970. 62 pp.

Mewshaw, Michael. Man in Motion. New York, N.Y.: Random House, 1970. 247 pp.

Politella, Dario. The Illustrated Anatomy of Campus Humor. Sunderland, Massachusetts: Syllabus Publications, 1971. 108 pp.

Smith, Charles Kay. Monograph: Logical & Persuasive Structures in Charles Darwin's Prose Style in Language and Style, Vol. III, No. 4, Sauther, Illinois: Illinois University Press, 1970. 243-273.

Swados, Harvey. Standing Fast. New York: Doubleday, 1970. 659 pp.

Swaim, Kathleen M. (Co-author). A Concordance to Milton's English Poetry. Oxford: The Clarendon Press, 1971. 912 pp.

Weston, John C. (editor). Hugh MacDirmid's, A Drunk Man Looks at the Thistle. Amherst, Massachusetts: University of Massachusetts Press, 1971. VII-XIV, 1-22 pp.

French/Italian/Classics:

Mankin, Paul (Co-author). Anthologie d'humour francais. Glenview, Illinois: Scott, Foresman & Co., 1971. 200 pp.

Taylor, Robert E. (Collab.). Bibliographie internationale de l'Humanisme et de la Renaissance. Geneve: Droz, 1970. 612 pp.

Germanic Languages:

Bauschinger, Sigrid. Elementary German: Third Edition. New York: van Nostrand, Reinhold, 1971. 385 pp. (With F. Fehling, W. Paulsen, A. Reh).

Beekman, Eric Montague. Homeopathy of the Absurd: The Grotesque in Paul van Ostaijen's Creative Prose. The Hague: Martinus Nijhoff, 1970. 196 pp.

_____. Lame Duck. Boston: Houghton Mifflin Co., 1971 242 pp.

Denkler, Horst. Gedichte der Menschheitsdammerung. Interpretationen expressionistischer Lyrik. Muchen: Fink, 1971. (von Kurt Pinthus).

Hispanic Languages:

Strum, Harlan G. (Co-author). Repaso. New York: W. W. Norton & Co. Inc., 1971. 246 pp.

_____. El libro de los buenos proverbios. Lexington: University of Kentucky Press, 1971. 161 pp.

History:

Cantor, Milton. Max Eastman. New York: Twayne Publishers, 1970. 207 pp.

Lewis, Archibald (editor). The Islamic World and the West AD 622-1492. New York: John Wiley & Sons, Inc. 1970. 146 pp.

McNeal, Robert (editor). Russia in Transition 1905-1914. New York: Holt, Rinehart and Winston, 1970. 115 pp.

Minear, Richard. Japanese Tradition and Western Law. Cambridge, Massachusetts: Harvard University Press, 1970. 244 pp.

Oates, Stephen. Visions of Glory, Texans on the Southwestern Frontier. Norman, Oklahoma: University of Oklahoma Press, 1970. 217 pp.

_____. To Purge This Land with Blood. New York: Harper and Row, 1970. 434 pp.

Sarti, Roland. Facism and the Industrial Leadership in Italy 1919-1940. Berkeley, Calif.: University of California Press, 1971. 154 pp.

Swartz, Marvin. The Union of Democratic Control in British Politics During the First World War. Oxford: The Clarendon Press, 1971.

Linguistics:

Heny, Frank W. "Explanatory Tone of Assignment Rules in Bantu," in Papers in African Linguistics. Edmonton: Linguistics Research, Inc., 1971. 175-199. (Edited by C.W. Kim and H. Stahlke).

Philosophy:

Brentlinger, John A. (editor). The Symposium of Plato. Amherst, Massachusetts: University of Massachusetts Press, 1970. 129 pp. (Translated by Suzy Q. Groden).

Chappell, Vere (editor). El lenguaje comun: Ensayos de filosofia analitica. Madrid: Editorial Tecnos, S.A., 1971. 145 pp. (Translated by Juan Ramon Capella of Ordinary Language).

Foster, Lawrence (editor). Experience and Theory. Amherst, Massachusetts: University of Massachusetts Press, 1970. 160 pp. (With J. W. Swanson).

Sleigh, Robert C. (editor). Necessary Truth. Englewood Cliffs, N.J.: Prentice Hall, Inc., 1971.

Slavic Languages:

Ivask, George. Zolushka: Collection of Poems. New York: Mosty, 1970. 64 pp.

Tikos, Laszlo M. For Freedom of Imagination: by Andrei Sinyavsky. New York: Holt, Rinehart and Winston, 1971. 212 pp. (With Murray Peppard).

SOCIAL AND BEHAVIORAL SCIENCES

Anthropology:

Zdenek, Salzmann (editor). A Symposium on East European Ethnography: Research Reports, No. 6. Amherst, Massachusetts: University of Massachusetts Press, 1970. 115 pp.

Political Science:

Beth, Loren P. The Development of the American Constitution, 1877-1917. New York: Harper and Row, 1971. 280 pp.

Fenton, John H. American National Government, Policy and Politics. Glenview, Illinois: Scott, Foresman & Co., 1971. 850 pp. (With Louis W. Koenig, Glendon Schubert, Lloyd Musolf and Laurence I. Radway).

Goldman, Sheldon and Jahnige, Thomas P. The Federal Courts as a Political System. New York: Harper and Row, 1971. 292 pp.

Harris, John S. Government Patronage of the Arts in Great Britain. Chicago: University of Chicago Press, 1970. 285 pp.

Houn, Franklin W. Den Kinesiaska Dommunisemens Historia. Stockholm: Wahlstrom and Widstrand, 1970. 285 pp.

Howards, Irving and Kaynor, Edward. Institutional Patterns for Evolving Regional Programs for Water Resource Management. Amherst, Massachusetts: Water Resources Center, University of Massachusetts and the U.S. Department of Interior, 1971.

Vali, Ferenc A. Bridge Across the Bosporus. Baltimore: Johns Hopkins, 1971. 410 pp.

Psychology:

Blair, W.C. Jr., O'Connor, Michael F., and Pollatsek, A. A Workbook of Mathematical Psychology, An Elementary Introduction. Englewood Cliffs, N.J.: Prentice Hall, 1970. 210 pp.

Speech:

Bevilacqua, Vincent M. (editor). George Turnbull, Treatise on Ancient Painting. Muchen: Wilhelm Fink Verlag, 1971.

Meyer, Timothy P. Adaptation of Microwave to Health Delivery: Medical Television in Southeast Ohio. Columbus, Ohio: National Graphics Publishers, Inc. 1971. 150 pp.

NATURAL SCIENCES AND MATHEMATICS

Botany:

Bierhorst, David W. Morphology of Vascular Plants. New York: Macmillan Co., 1971. 560 pp.

Schuster, Rudolf M. A Monograph of the New Zealand and Tasmanian Plagiochilaceae. Jour, Hatt. Bot. Lab. 34: 10225, plates 1-77. (With Hiroshi Inour, 1971).

Chemistry:

Richason, G. R. (editor). Chemistry 111-112 Worldbook and Laboratory Manual. Amherst: H. I. Newell, Inc. 314 pp.

_____. Chemistry 113-114 Workbook and Laboratory Manual. Amherst: H. I. Newell, Inc. 195 pp.

Geology:

Hafner, James A. Bibliography of Miscellaneous Research Materials on Laos. Belgium: Centre d'Etude du Sud-Est Asiatique et de l'Extreme Orient. 113 pp.

Meyer, David R. Spatial Variation of Black Urban Households. Chicago: University of Chicago, 1970. 127 pp.

Motts, W. S. (editor and contributor). Geology and Hydrology of selected Playas in western United States. Amherst, Massachusetts: University of Massachusetts Press. 296 pp.

Mathematics:

Eisenberg, M. Axiomatic Theory of Sets and Classes. New York: Holt, Rinehart, and Winston, 1971. 366 pp.

_____. Calculus I and II. Boston: Houghton Mifflin Co. 1971. 563 pp.

_____. Linear Algebra. Boston: Houghton Mifflin Co. 1971. 462 pp.

Physics:

Brownstein, K. and Gray, R. and Williams, S. Student Study Guide with Programmed Problems. New York: John Wiley and Sons, 531 pp.

TABLE 15

PAYROLL FROM RESEARCH AND TRAINING GRANTS
AND CONTRACTS (Fiscal Years 1970 and 1971)

(Text page 15)

	1970	1971
HUMANITIES AND FINE ARTS:		
Afro-American Studies	-	$ 111
Art	$ 4,312	7,358
Comparative Literature	1,206	3,473
English	37,085	40,724
French, Italian and Classics	36,301	10,633
Germanic Languages	18,899	11,999
Hispanic Languages	-	2,036
History	12,177	19,325
Linguistics	473	584
Music	1,031	2,015
Philosophy	16,396	8,199
Slavic Languages	-	-
Total	127,880	106,457
SOCIAL AND BEHAVIORAL SCIENCES:		
Anthropology	1,084	2,071
Asian Studies	-	619
Economics	7,964	33,646
Government (a)	95,062	79,491
Psychology	279,036	276,290
Sociology	94,397	21,819
Speech	32,445	35,291
Total	509,988	449,227
NATURAL SCIENCES AND MATHEMATICS:		
Biochemistry	87,167	87,165
Botany	95,126	63,191
Chemistry	258,823	246,356
Geology/Geography (b)	62,973	63,910
Mathematics/Statistics	80,193	93,275
Microbiology	165,473	134,439
Physics/Astronomy	569,885	565,447
Zoology	243,229	243,528
Total	1,562,869	1,497,311
GRAND TOTAL	$2,200,737	$2,052,995

Notes:

(a) The totals listed represent a combination of the Government Department and the Bureau of Government Research.

(b) Figures represent a combined total for Geology and Geography.

TABLE 16

SELECTED PROFESSIONAL ACTIVITIES OF THE FACULTY

(Text page 15)

HUMANITIES AND FINE ARTS

English:

Brogan, Howard: National Society of Professors, National Education Association-Member, Advisory Committee; Vice President, College English Association.

Copeland, Thomas W.: General Editor, Correspondence of Edmund Burke.

Duckert, Audrey: Consultant on American English and proofviewer for Oxford English Dictionary.

Emerson, Everett: Editor, Early American Literature.

Frank, Joseph: Assistant Editor, Seventeenth-Century News; Consulting Editor, English Literary Renaissance; Chairman, Bellwether Conference, ADE University of Massachusetts, October, 1970; Member ADE Executive Board to January, 197

Gibson, Walker: Chairman, College Section, National Council of Teachers of English.

Junkins, Donald: Director, Northern N.E. Poetry Circuit.

Kinney, Arthur: Executive Secretary, Northeast Modern Language Association, April, 1971.

Page, Alex: Consultant on MS submissions, University of Minnesota Press and University of Massachusetts Press.

Plumstead, A. W.: Book Review Editor, Early American Literature; General Editor, The Journals and Miscellaneous Notebooks of Ralph Waldo Emerson; N. E. Director, American Literary Manuscripts.

Politella, Dario: Consulting Editor, Photolith Magazine, Memphis, Tennessee; Scholastic Editor, University of Minnesota, Oxbridge Publishing Company of New York City, Cantebury Communications New York City Publishing House, Campus Market Report of Chicago; Founding Editor, Syllabus; Editor, Syllabus Publications of NCCPA's Commission on Freedoms; Coordinator, National Commission on Freedoms and Responsibilities of College Student Press; Immediate Past President of NCCPA to November, 1971.

French, Italian, and Classics:

Lawall, Gilbert: Member, Board of Trustees of the Amherst Academy; Board of Directors of the Massachusetts Foreign Language Association.

French, Italian, and Classics (continued):

Taylor, Robert E.: Associate Editor, Renaissance Society of America; Seminar Associate, Columbia University.

Weiner, Seymour S.: Editor-in-Chief, Cabeen Bibliography.

Germanic Languages:

Born, Jurgen: Editorial Committee for Critical Edition of the Works of Franz Kafka.

Reed, Carroll E.: Executive Committee, Linguistic Society of America; Executive Council, American Dialect Society; Nominating Committee, Modern Language Association section on German Literature to 1700; Commission on the English Language, National Council of Teachers of English; Reader, projects for Canadian National Council for Publications of the American Dialect Society.

Hispanic Languages:

Rothberg, Irving P.: Editor, Hispania; Member, Inaugural Selection Committee, Center for Twentieth Century Studies, University of Wisconsin, Milwaukee, November 8-10, 1970; Member, National Committee for the Support of Foreign Languages, appointed by the AATSP.

History:

Bernhard, Winfred: Member, New England Federal Archives Advisory Council.

Chrisman, Miriam: Officer, Reformation Society.

Lewis, Archibald: Elected Fellow, Royal Historical Society.

Potash, Robert: Chairman, Latin American Studies Association.

Linguistics:

Freeman, Donald C.: Chairman, Linguistics and Literature group for the 1972 Northeast Modern Language Association Meetings; Member, Committee on the Golden Anniversary of the Linguistic Society of America.

Philosophy:

Ackermann, Robert: Member, American Philosophical Association Program Committee.

Chappell, Vere: Consulting Editor in Philosophy, Random House-Knopf; Member, American Philosophical Association Committee on Research.

Philosophy (continued):

Sleigh, Robert: Invited Participant in American Philosophical Association; Chairman, American Philosophical Association, Pacific Division, session.

Slavic Languages:

Tikos, Laszlo M.: Consultant on Soviet Literature to Holt, Rinehart and Winston and Harper and Row.

SOCIAL AND BEHAVIORAL SCIENCES

Anthropology:

Ingersoll, Daniel W.: Assistant Editor, Man in the Northeast; Consultant on Historic Archeology for National Heritage Limited, Toronto.

Woodbury, Richard B.: Archeological Consultant, Connecticut Historical Commission; Member, Anthropology Panel of the National Science Foundation; Book Review Editor for the New World, American Journal of Archaeology.

Economics:

Sonnenschein, Hugo F.: Chairman, Program Committee, 1971 Winter Meeting of the Econometric Society.

Government:

Beth, Loren P.: Managing Editor, Polity.

Connolly, William: Member, Executive Committee of the Caucus for a New Political Science.

Friedman, Harvey: National Secretary-Treasurer, University Labor Education Association, 1970-71.

Lewy, Guenter: Committee on Professional Ethics of the American Political Science Association, three year term effective January, 1971.

Maki, John: Member, Committee on the Thirtieth Anniversary Volume of the Journal of Asian Studies; Northeast Asia Regional Council of the Association for Asian Studies; Subcommittee on Political Science of the Joint Committee on Japanese Studies.

Psychology:

Appley, Mortimer: Member, Advisory Committee, Law Enforcement and Administration of Criminal Justice, Commonwealth of Massachusetts.

Berger, Seymour: Editoral Board, Journal of Personality and Social Psychology.

Clifton, Rachel: Consulting Editor, Psychophysiology; Guest Editor, Journal of Experimental Child Psychology.

Eagly, Alice: Editoral Consultant, Journal of Personality and Social Psychology and the Journal of Personality.

Epstein, Seymour: Editorial Board, Journal of Consulting and Clinical Psychology; Editorial Consultant, Journal of Personality; Editoral Consultant, Journal of Personality and Social Psychology.

Phillips, Jeanne: Member, Executive Committee of Council of Directors, University Clinical Psychology Programs.

Raush, Harold: Editorial Consultant, Psychological Bulletin; Journal of Personality and Social Psychology.

Steiner, Ivan: Associate Editor, Journal of Personality and Social Psychology; Editorial Consultant, Scott, Foresman Company, and Harcourt Brace Johanovich, Inc; Secretary-Treasurer, Society of Experimental Social Psychology.

Speech:

Bevilacqua, Vincent M.: Associate Editor, Speech Monographs; Associate Editor, The Quarterly Journal of Speech.

Blankenship, Jane: Editorial Consultant, Prentice-Hall, Allyn and Bacon, Dickinson, and Wadsworth Publishing Company.

Matlon, Ronald J.: Chairman, District VIII By-Laws Committee for the National Debate Tournament; Chairman, Committee on Debate Program and Debate Tournament Standards, American Forensic Association; Member, American Forensic Association Public Relations Committee; Chairman, American Forensic Association Membership Committee.

Melrose, Jay: Editorial Consultant, Journal of Speech and Hearing Disorders.

Meyer, Timothy P.: Editor, Volume II of Medical Television in South-West Ohio by John Burke, Ohio Educational Television Network Commission.

NATURAL SCIENCE AND MATHEMATICS

Botany:

Bierhorst, David W.: Vice President, International Society of Plant Morphologists; Chairman, Pteridology Section, Botanical Society of America; Reviewer, NSF and American Journal of Botany.

Bigelow, Howard: Board of Editors, Lloydia.

Klekowski, Edward J. Jr.: Secretary-Treasurer, Pteridological Section, Botanical Society of America.

Wilce, Robert T.: Editor, Journal of Phycology.

Chemistry:

Archer, Ronald D.: Invited Lecture, Symposium on Stereochemistry and Crystal Structure of Coordination Chemistry, Slovak Chemical Society and Slovak Academy of Science; Invited Lectures, International Confrences in Debrecen, Hungary, Zakopane, Poland, and Krakow, Poland.

Barnes, Ramon M.: Member, Local Sections Committee, Society for Applied Spectroscopy; Chairman, Program Committee, Society for Applied Spectroscopy.

Brandts, John F.: Invited Lecture, Gordon Research Conference on Biopolymers; Invited Lecture, Annual Calorimetry Conference; Session Chairman, Annual Calorimetry Conference.

Chien, James C. W.: Chairman, Biopolymer Symposium, Northeastern Regional American Chemical Society Meeting.

McEwen, William E.: Member, Board of Editors, Journal of Organic Chemistry; Member, Board of Editors, Phosphorus and the Heavier Group Va Elements; Member, Committee on Nominations and Awards, American Chemical Society; Consulting Editor, Topics in Phosphorus Chemistry.

Siggia, Sidney: Member, Advisory Panel, National Bureau of Standards; Member, Advisory Panel, Oak Ridge National Laboratory; Member, Executive Committee, Division of Analytical Chemistry, American Chemical Society; Advisory Editor, Analytical Abstracts; Advisory Editor, Chemical Instrumentation; Committeeman, International Union of Pure and Applied Chemistry.

Stein, Richard S.: Member, Gordon Research Conference Selection and Scheduling Committee; Member, Founding Committee, Society for Materials Research; Member, Advisory Board, Journal of Polymer Science; Member, Advisory Board, Journal of Polymeric Materials; Member, Advisory Board, Journal of Texture of Crystalline Solids.

Geology and Geography:

Haggerty, Stephen E.: Finished analysis of Apollo XI and XIII moon rock samples, and is now working on Apollo XIV samples.

Hartshorn, Joseph H.: Editorial Consultant, John Wiley and Sons, Houghton-Mifflin, Barre Publishers, the Connecticut Geological and Natural History Survey, and four professional journals.

Wilkie, Richard W.: Cartography Editor, Statistical Abstract of Latin America, UCLA.

Mathematics and Statistics:

Cohen, Haskell: Collaborating Editor, American Mathematics Monthly; Reviewer, Mathematical Reviews.

Kleyle, Robert M.: Referee, Annals of Mathematics and Statistics and Journal of the American Statistical Association.

Koch, Robert J.: Associate Editor, Duke Mathematical Journal and Semigroup Forum; Reviewer for Mathematical Reviews and Zentralblatt für Mathematik.

Microbology:

Canale-Parola, Ercole: Member, International Toxonomic Sub-Committee on Spirochetales.

Holt, Stanley C.: Editorial Boards, Journal of Bacteriology.

Physics and Astronomy:

Strong, John D.: Member, International Academy of Astronautics.

Zoology:

Anderson, Everett: Member, Editorial Board, Associate Editor, Biology of Reproduction, Anatomical Record, Journal of Experimental Zoology, and Journal of Morphology.

Honigberg, Bronislaw M.: Editor-in-Chief, Journal of Protozoology; Associate Editor, Transactions American Microscopical Society; Editorial Board, International Journal of Parasitology.

Zoology (continued):

Roberts, John L.: Secretary, Division of Comparative Physiology and Biochemistry, American Society of Zoologists.

Roberts, Larry S.: Assistant Editor, Journal of Parasitology; Member, Editorial Board, Experimental Parasitology.

APPENDIX B

HUMANITIES AND FINE ARTS (59)

Deans' Office, CAS (1)

Fata, Julia A. - Instructor: Advisor CEEBS Students

A.B., St. Mary's College
Candidate for Ph.D., Johns Hopkins University
Research Assistant, Foreign Language Innovative Curricula Study, Ann Arbor, Michigan
Research Assistant, English Language Institute, Ann Arbor, Michigan

Afro-American Studies (4)

Lester, Julius - Visiting Lecturer: Political Science

B.A., Fisk University

Lynch, Acklyn R. - Associate Professor: Economics/Political Sciences

A.B., Howard University
M.A., Harvard University
M.A., The Johns Hopkins University
Lecturer, Howard University
Assistant Professor, Federal City College
Associate Professor, Director, CAAS, University of Michigan
Phi Beta Kappa

Smith, Melvin W. - Instructor: Sociology

B.A., American International College
Director, On-The-Job Training Project
Community Organization Specialist and Deputy Director of Community Organization

Wiley, Jean - Assistant Professor: Literature

B.A., Morgan State College
M.A., University of Michigan
Assistant Professor, Federal City College, Washington, D.C.

Art (6)

Forwood, Jr., William L. - Instructor: American Art History

B.A., University of Delaware
M.A., University of Delaware
Candidate for Ph.D., University of Delaware

Art (continued)

Kearns, Jerry - Assistant Professor: Sculpture

B.A., University of California, Santa Barbara
M.F.A., University of California, Santa Barbara
Visiting Lecturer and Associate Professor, University of California, Los Angeles

Mochon, Anne - Instructor: 19th & 20th Century Art History

A.B., Vassar College
M. Philosophy candidate, Yale University

Patterson, William J. - Assistant Professor: Printmaking

B.F.A., Hartford Art School of the University of Hartford
M.F.A., Syracuse University School of Art

Rhie, Marylin M. - Visiting Lecturer: Oriental Art

M.A., University of Chicago
Ph.D., University of Chicago

Stricevic, George - Visiting Associate Professor: Medieval Art

1951 graduated in History of Fine Arts, University of Belgrade
1956, Ph.D., Serbian Academy of Sciences and Fine Arts
1959, Hollier Student, University College, London
1965-66 Lecturer, University of Edinburgh
1966-68 Sir James Knott Fellow, University of Newcastle
1968 -- Visiting Assistant Professor, Barnard College

Comparative Literature (3)

Will, Frederic - Full Professor: Literary Theory, Translation, the Enlightment, Classical Literature

B.A., University of Indiana
Ph.D., Yale University
Instructor, Dartmouth
Assistant Professor, Pennsylvania State
Assistant Professor, Texas
Associate Professor, Iowa
Professor, Iowa
Phi Beta Kappa

Lenson, David R. - Assistant Professor: Modern Literature & Criticism, Tragedy

A.B., Princeton
M.A., Princeton
Ph.D., Princeton

Comparative Literature (continued)

Martin, Elizabeth Petroff - Assistant Professor/Instructor: Medieval & Modern Literature

B.S., Northwestern University
M.A., University of California, Berkeley
Candidate for Ph.D., University of California, Berkeley
Acting Instructor, University of California, Berkeley
Assistant Professor, California State College, Hayward, California

English (13)

Carey, George - Associate Professor/Tenure: Folklore

B.A., Middlebury
M.A., Indiana
Ph.D., Indiana
Assistant Professor, Associate Professor, University of Maryland

Carson, Barbara - Assistant Professor: American Literature

B.A., Florida State University
M.A., Johns Hopkins University
Ph.D., Johns Hopkins University
Phi Beta Kappa
Assistant Professor, Towson State College

Donohue, Joseph W., Jr., - Associate Professor: English Drama

A.B., Johns Hopkins University
M.A., Georgetown University
Ph.D., Princeton University
Assistant Professor, Princeton University

Jorgens, Jack J. - Assistant Professor: Shakespeare & Modern Literature

B.A., Carleton College
M.A., City College of New York
Ph.D., New York University
Assistant Professor, University of Connecticut

Kahn, Coppelia - Assistant Professor: Shakespeare

B.A., Barnard College
M.A., University of California, Berkeley
Ph.D., University of California, Berkeley
Instructor, Mills College, Oakland, California
Acting Instructor, University of California, Berkeley
Lecturer, University of California, Berkeley

English (continued)

Matlack, James H. - Assistant Professor: American Literature

B.A., Princeton University
M.A., Oxford University
M.A., Yale University
Ph.D., Yale University
Assistant Professor, Cornell University
Phi Beta Kappa

Neueboren, Jay - Assistant Professor & Resident Artist:

B.A., Columbia College
M.A., Indiana University
Lecturer, Stanford University
Assistant Professor, State University of New York
Phi Beta Kappa

Quigley, Austin - Assistant Professor: Linguistics & Drama

B.A., University of Nottingham, England
M.A., University of Birmingham, England
Ph.D., University of California, Santa Cruz
Schoolmaster, St. Oswald's Primary School, Wrekenton, Engla
Lecturer, Shenstone College of Education, Birmingham, Englan
Schoolmaster, Bournville Boys' Grammar School, Birmingham, England

Reed, James - Assistant Professor: Creative Writing

B.A., Michigan State University
M.F.A., University of Montana

Swados, Harvey - Professor with Tenure: Creative Writing

A.B., University of Michigan
Visiting Lecturer, (Writers Workshop), State University of Iowa
Language & Literature Faculty, Sarah Lawrence College
Visiting Professor, San Francisco State College
Visiting Professor, Columbia University
Lectures & Readings, University of California, Princeton, etc.

Tate, James - Assistant Professor: Creative Writing

B.A., Kansas State College of Pittsburg
M.F.A., University of Iowa
Assistant Professor, Emerson College
Assistant Professor, Columbia University

English (continued)

Wolff, Cynthia - Assistant Professor: 18th Century Literature, Rhetoric

Radcliffe, B.A.
Ph.D., Harvard University
Assistant Professor, Manhattanville College

Ziff, Howard M. - Associate Professor with Tenure: Journalistic Studies

B.A., Amherst College
Graduate Fellowship in Philosophy, Columbia University
Ford Foundation (30 Graduate Hours), Columbia University

French/Italian/Classics (8)

Bragger, Jeannette D. - Assistant Professor: French Language & Literature Stendhal

B.A., University of California at Santa Barbara
M.A., University of California at Santa Barbara
Candidate for Ph.D., University of California, Santa Barbara

Hytier, Jean - Visiting Professor: Valery, Gide, French 20th Century Literature; French Language & Literature

Baccalaureat es Lettres, Lycee Rollin
Licence es Lettres, University of Paris
Diplome superieur, University of Paris
Doctorat es Lettres, University of Lyon
Teacher, College de Charolles
Professor, University of Teheran
Professor, University of Algiers
Director of Fine Arts, Consultant to the Ministry of Nat. Education
Professor, Columbia University
Professor Emeritus, Columbia University
Visiting Professor, University of California, Davis

Porter, Dennis Dudley - Associate Professor: 19th Century Literature Language Supervision

B.A., Cambridge University, England
Ph.D., University of California, Berkeley
Assistant Professor, University of California, Berkeley

French/Italian/Classics (continued)

Sachs, Margot Jane - Instructor/Assistant Professor: French Language & Literature

B.A., University of Colorado
M.A., University of California, Berkeley
Ph.D., Candidates, University of California, Berkeley
Phi Beta Kappa

Serverino, Roberto - Assistant Professor/Instructor: Italian Language & Literature Ren.

B.A., Columbia Union College
M.A., University of Illinois, Urbana
Ph.D., Candidate, University of Illinois, Urbana

Triolo, Franco - Assistant Professor/Instructor: Italian Language & Literature, Comp. Lit

B.A., University of Maryland
M.A., University of Maryland
Candidate for Ph.D., University of Illinois

Dyer, Robert Rutherfurd - Professor with Tenure (Classics): Greek & Latin Language & Literature, Linguistics

B.A., Auckland University College (University of New Zealand)
M.A., Auckland University College (University of New Zealand)
Lecturer, Australian National University, Canberra
Associate Professor, Indiana University
Visiting Associate Professor, University of Michigan
Professor of Stylistics, University of Pisa
Professor & Chairman of Classics, Oakland University, Rochester, Michigan

Cleary, Vincent J. - Associate Professor (Classics): Latin Teacher Preparation, Latin Poetry

B.S., St. Joseph's College, Philadelphia, Pennsylvania
M.A., Villanova University, Villanova, Pennsylvania
Ph.D., University of Pennsylvania
Assistant Professor, Villanova University
Visiting Professor, Rosemont College
Visiting Professor, University of Pennsylvania
Assistant Professor, Associate Professor, Ohio State University, Columbus, Ohio

German (1)

Malsch, Wilfried R. - Professor: Age of Goethe, Romanticism

Abitur-diploma, Bismarcksgymnasium, Karlsruhe, Germany
Ph.D., Freiburg University
Various Academic Positions in Europe
Visiting Associate Professor, Visiting Professor, Rice University
Visiting Professor, Tubingen University
Professor, University of Alberta at Edmonton, Alberta, Canada

Hispanic (2)

Rauchwarger, Judith - Instructor: Spanish Language & Literature

B.A., Queens College of New York
M.A., University of Michigan
Ph.D., University of Michigan, Candidate

Zamora, Juan C. - Assistant Professor: Spanish Linguistics

Doctor, University de la Habana
Licenciado, University de la Habana
Ph.D., State University of New York at Buffalo
Instructor, S.U.N.Y. at Buffalo
Lecturer, S.U.N.Y. at Buffalo

History (8)

Bickford, Christopher - Assistant Professor: European History

B.A., Union College
M.A., Harvard University
Ph.D., University of Connecticut
Phi Beta Kappa

Biddle, David W. - Assistant Professor - Arabic History Instructor

B.A., University of Texas
M.A., University of Texas
Candidate for Ph.D., School of Oriental & African Studies, University of London W.C.1.

Frank, Robert G. - Assistant Professor: History of Science

A.B., Stanford University
M.A., Harvard University
Ph.D., Harvard University
Assistant Professor, University of Rhode Island
Assistant Professor, Tufts University
Phi Beta Kappa

History (continued)

Griffith, Robert W. - Associate Professor: Modern U.S. History

B.A., DePauw University
M.A., University of Wisconsin
Ph.D., University of Wisconsin
Assistant Professor, University of Georgia
Phi Beta Kappa

Laurie, Bruce G. - Assistant Professor: U.S. Labor History

B.A., Rutgers University
M.A., University of Pittsburgh
Ph.D., University of Pittsburgh
Phi Beta Kappa

Minear, Richard H. - Associate Professor:

B.A., Yale College
M.A., Harvard College
Ph.D., Harvard College
Assistant Professor, Ohio State University

Pelz, Stephen E. - Assistant Professor: Modern U.S. History

B.A., Johns Hopkins University
M.A., Harvard University
Ph.D., Harvard University Candidate
Phi Beta Kappa

Swenson, Philip David - Assistant Professor: Modern U.S. History

B.A., San Diego State College
M.A., San Diego State College
Ph.D., University of Washington

Linguistics (4)

Fraser, James Bruce - Visiting Associate Professor: Theory & Applied Linguistics

B.E.E., Cornell University
Ph.D., Massachusetts Institute of Technology
Director, Language Research Foundation, Cambridge, Mass.

Heringer, James T. - Assistant Professor: Phonology, Generative Semantics

A.B., Harvard University
Ph.D., University of Illinois, Urbana
Visiting Lecturer, University of California At Los Angelos
Research Associate, The Ohio State University

Linguistics (continued)

Peterson, Thomas H. - Assistant Professor: Generative Semantics

B.A., University of Wisconsin
M.A., University of California
Ph.D., University of California, Los Angeles
Lecturer, University of California, Santa Barbara
Assistant Professor, California State College, Los Angeles

Thomas, Linda Kopp - Lecturer: General Linguistics; Phonology

B.A., Cornell University
M.A., University of Chicago
Candidate for Ph.D.
Phi Beta Kappa

Music (4)

Daehler, F. Carl, Jr. - Visiting Instructor: French Horn, Assistant Band Director

B.M., University of Michigan

Gaver, William D. - Assistant Professor: Music Education

B.M., Eastman School of Music
M.M., University of Houston
D.M.A., expected, University of Missouri-Kansas City

Tanner, Joanne - Lecturer: Flute

B.M., Eastman School of Music
M.M., Catholic University of America

Teraspulsky, Leopold - Professor: Cello

B.A., Manhattan School of Music
Soloist at 1st Casals Bach Festival in Prades, France
Member of New friends of Music Quartet
Chicago debut recital in Orchestra Hall
Staff 'cellist A.B.C. Network, Chicago
Staff 'cellist N.B.C. Network, Chicago
Roosevelt College String Quartet and Faculty
Pro Musica Trio at Chicago
Principal 'cellist Grant Park Orchestra and soloist
European Tours - with debuts in London, Paris, Berlin, Berne
Brussels, and Amsterdam

Philosophy (4)

Jubien, Michael - Assistant Professor: Philosophy of Logic

A.B., Dartmouth College
Ph.D., Rockefeller University

LeTourneau, John J. - Visiting Assistant Professor: Logic

B.S., University of Washington
Ph.D., University of California
Assistant Professor, Fisk University
Research Associate, Vanderbilt University

Sellars, Wilfred S. - Visiting Professor: Metaphysics & Epistemology

B.A., University of Michigan
M.A., University of Buffalo
B.A., Oxford University
M.A., Oxford University
State University of Iowa
University of Minnesota
Yale University
University of Pittsburgh, Professor

Wolff, Robert Paul - Professor: History of Philosophy & Political Philosophy

A.B., Harvard College
A.M., Harvard University
Ph.D., Harvard University
Instructor, Harvard University
Assistant Professor, University of Chicago
Visiting Lecturer, Wellesley College
Associate Professor, Columbia University
Visiting Professor, Rutgers University
Professor, Columbia University
Phi Beta Kappa

Slavic Languages (1)

Rothstein, Robert A. - Associate Professor: Russian & Polish Languages Slavic Civilizations; Slavic & General Linguistic Russian & Polish Syntax

S.B., M.I.T.
A.M., Harvard University
Ph.D., Harvard University
Visiting Assistant Professor, Indiana University
Assistant Professor, Harvard University

SOCIAL AND BEHAVIORAL SCIENCES (35)

Anthropology (4)

Cole, John W. - Assistant Professor: Anthropology

A.B. -University of Michigan
M.A. -University of Michigan
Ph.D. -University of Michigan
Research Assistant, University of Michigan
Assistant Professor, Wayne State University

Hudson, Alfred B. - Associate Professor: Anthropology

A.B. -University of California, Berkeley
Ph.D. -Cornell University
Assistant Professor, Michigan State University
Associate Professor, Michigan State University
Phi Beta Kappa

Wobst, H. Martin - Assistant Professor: Anthropology

Abitur, Kaiser Wilhelms Gymnasium, Hannover
B.A. -University of Michigan
M.A. -University of Michigan
Ph.D. -University of Michigan

Workman, Peter Louis - Associate Professor: Anthropology and Genetics

B.S. -University of California, Davis
Ph.D. -University of California, Davis
Associate Professor, Mount Sinai School of Medicine, New York

Asian Studies (2)

Cohen, Alvin P. - Assistant Professor: Chinese Philology and Bibliography, Classical Chinese

B.S. -University of California, Berkeley
M.A. -University of California, Berkeley
Ph.D. -University of California, Berkeley

Ozawa, Yoshio - Instructor: Japanese Language

B.A. -Doshisha University, Japan
M.A. -Doshisha University, Japan
B.A. -Amherst College

Economics (4)

Cole, Robert E. - Visiting Associate Professor: Economic Theory/ Economic Developmer

B.S. -Iowa State University
M.A. -University of Connecticut
Ph.D. -Northwestern University
Assistant Professor, Washington State University

Ehrenberg, Ronald G. - Assistant Professor: Econometrics

B.A. -Harpur College
M.A. -Northwestern University
Ph.D. -Northwestern University
Instructor, Northwestern University
Assistant Professor, Loyola University

Mirman, Leonard J. - Assistant Professor: Economic Theory

B.A. -Brooklyn College
M.S. -New York University
M.S. -University of Rochester
Ph.D. -University of Rochester
Instructor, St. Peter's College, Rutgers University
Assistant Professor, Cornell University

Rottenberg, Simon - Professor, and Head of Department

A.B. -The George Washington University
A.M. -Harvard University
Ph.D. -Harvard University
Director, Labor Relations, Institute, University of Puerto Rico
Post-doctoral Fellow, University of Chicago
Visiting Assistant Professor, University of Chicago
Assistant Professor, University of Chicago
Director, Economics Research Center, Catholic University of Chile
Acting Director, Economics Research Center, University of Chicago
Associate Professor, University of Chicago
Professor, Roosevelt University
Professor, State University of New York at Buffalo
Professor, Duke University

Political Science (3)

Eagan, Patrick L. - Assistant Professor: Public Policy

B.S. -Regis College
M.S. -Colorado State
Ph.D. -University of California, Riverside
Lecturer, Assistant Professor, California State, San Bernardino
Associate Chairman, Simulation Laboratory, University of California, Riverside

Kline, Harvey F. - Assistant Professor: Comparative Government

B.A. -University of North Carolina
Ph.D. -University of Texas
Professor de Ciencia Politica, Universidad de los Andes, Bogota, Colombia
Phi Beta Kappa

Pollock, Paul K. - Visiting Associate Professor: Constitutional Law

B.A. -University of Colorado
M.A. -Cornell University
Ph.D. -Cornell University
Assistant Professor, Beloit College
Associate Professor, Beloit College

Psychology (9)

Ajzen, Icek - Assistant Professor: Social Psychology

B.A. -Hebrew University of Jerusalem, Israel
A.M. -University of Illinois, Urbana Illinois
Ph.D. -University of Illinois, Urbana Illinois
Research Assistant, University of Illinois
Assistant Professor, University of Illinois

Averill, James R. - Assistant Professor: Psychophysiology

B.A. -San Jose State College
Ph.D. -University of California, Los Angeles
Lecturer, University of California, Santa Barbara
Assistant Research Psychologist, University of California, Berkeley
Lecturer, University of California, Berkeley

Balagura, Saul - Associate Professor: Biopsychology

M.D. -Facultad de Medicina, Universidad del Valle, Cali, Colombia
M.A. -Princeton University
Ph.D. -Princeton University
Assistant Professor, University of Chicago

Bean, Joan P. - Assistant Professor: Educational Psychology

B.A. -San Jose State College
M.A. -San Jose State College
Ph.D. -University of California

Bogartz, Richard S. - Professor: Child Psychology

B.A. -University of California, Los Angeles
Ph.D. -University of California, Los Angeles
NIMH Post-doctoral Research Fellow, Institute of Child Behavior and Development, University of Iowa
Visiting Assistant Professor, University of Iowa
Assistant Professor, University of Iowa
Associate Professor, Visiting, University of Illinois
Associate Professor, University of Illinois
Professor, University of Illinois

Dorris, James William - Assistant Professor: Social and Clinical

B.A. -University of California, Berkeley
M.A. -University of California, Los Angeles
Ph.D. -University of California, Los Angeles
Phi Beta Kappa
Post-doctoral Clinical Intern, Southern California Permanente Med. Group
Post-doctorate, University of California, Los Angeles

Hill, Kennedy T. - Visiting Associate Professor: Child Psychology

B.A. -Yale University
Ph.D. -University of Minnesota
Assistant Professor, University of Illinois
Associate Professor, University of Illinois

Staub, Ervin - Associate Professor: Personality

Attended - Technical University, Budapest, Hungary
Attended - Technical University, Vienna, Austria
Attended - University of Vienna, Austria
A.B. -University of Minnesota
Ph.D. -Stanford University, Stanford, California
Assistant Professor, Harvard University
Lecturer on Clinical Psychology, Harvard University
Phi Beta Kappa

Todd, David M. - Assistant Professor: Clinical Psychology

B.A. -Alma College, Michigan
Ph.D. -University of Michigan

Sociology (5)

Faulkner, Robert R. - Assistant Professor: Industrial, Professions, Social Psychology

B.A. -University of California, Los Angeles
M.A. -University of California, Los Angeles
Ph.D. -University of California, Los Angeles
Assistant Professor, University of Rochester

Felton, William S. - Visiting Professor: Family Sociology

B.A. -Marietta College
M.A. -University of Colorado
Ph.D. -University of Colorado
Instructor, University of Maryland
Lecturer, University of Maryland
Assistant Professor, Florida State University
Assistant Professor, Rollins College, Winter Park, Florida
Associate Professor, Keene State College, New Hampshire
Professor, Keene State College, New Hampshire

Harris, Anthony R. - Instructor: Social Psychology/Deviance

B.A. -Queens College, New York
B.A. and M.A., Peterhouse, Cambridge University
M.A. and Candidate for Ph.D., Princeton University
Lecturer, Princeton University

Kaplan, Samuel W. - Instructor: Family, Social Stratification

B.A. -University of Massachusetts
M.A. -University of California, Berkeley
Candidate for Ph.D., University of California, Berkeley
Instructor, University of California, Berkeley
Assistant Professor, University of California, Santa Cruz

Lincoln, Alan Jay - Instructor: Race Relations, Social Psychology

B.S. -Michigan State University
M.S. -University of Massachusetts
Candidate for Ph.D., University of Massachusetts

Speech (8)

Brown, Kenneth L. - Associate Professor: Speech Education

B.S. -Syracuse University
M.A. -Northwestern University
Ph.D. -Northwestern University
Instructor, Northwestern University
Assistant Professor & Chairman, Northwestern University
Assistant Professor, Associate Professor, University of Colorado
Program Director of Speech Education, University of Colorado
Associate Professor & Chairman, Carlow College

Gillispie, Kathryn Potter - Instructor: Communication Disorders
Clinical Audiology

B.S. -Bucknell University
M.A. -Temple University
Instructor, Temple University School of Medicine & Hospital
Instructor, Harbor Junior College
Clinical Audiologist, Winchester Ear, Nose & Throat Clinic, Los Gatos, California

Rood, Stewart R. - Instructor: Communication Disorders

B.S. -Brooklyn College
M.S. -Brooklyn College
Candidate for Ph.D., University of Pittsburgh

Rottenberg, Annette T. - Lecturer: Rhetoric

B.S. -Wilson Teachers College
M.A. -Harvard University
Candidate for Ph.D., University of Chicago

Seymour, Charlena M. - Assistant Professor: Communication Disorders

B.F.A. -Howard University
M.A. -Ohio State University
Ph.D. -Ohio State University

Seymour, Harry N. - Assistant Professor: Communication Disorders

B.A. -Howard University
M.A. -Ohio State University
Ph.D. -Ohio State University

Sillars, Malcolm - Professor: Rhetoric & Public Address

B.A. -University of Redlands
M.A. -University of Redlands
Ph.D. -University of Iowa
Iowa State College
University of Iowa
Los Angeles State College
San Fernando Valley State College, Professor
Chairman, San Fernando Valley State College, Department of Speech
Acting Chairman, Division of Language and Literature,
Associate Dean, School of Letters and Science,
Acting President,
San Fernando Valley State College

Tolhurst, Gilbert - Professor: Communication Disorders (Psycho-Acoustics & Voice Communications

A.B. -Brigham Young University
M.A. -Brigham Young University
Ph.D. -State University of Iowa
Associate Professor, Florida State University
Research Associate, Ohio State University Research Foundation
Psychologist, U.S. Naval School of Aviation Medicine
Head, Physiological Psychology Branch, The Office of Naval Research
Navy Representative on the Aerospace Medical Panel of AGARD/NATO

NATURAL SCIENCES AND MATHEMATICS (30)

Biochemistry (2)

Fournier, Maurille J. - Assistant Professor: Biochemical Genetics

B.A., University of Vermont
Ph.D., Dartmouth College
Research Association, American Cancer Society, State University of New York at Stony Brook
Research Biochemist, Walter Reed Army Institute of Research
Post-doctoral Fellow, American Cancer Society, Laboratory of Biochemical Genetics, National Heart & Lung Institute

Fuller, Clinton R. - Professor & Head of Department: Biochemistry

B.A., Brown University
M.A., Amherst College
Ph.D., Stanford University
MA., Dartmouth College (Honorary)
Associate Plant Physiologist, Brookhaven National Laboratory
Plant Biochemist, Brookhaven National Laboratory
NSF Senior Post-doctoral Fellow, Oxford University
Professor & Chairman of Microbiology, Dartmouth Medical School
Chairman, Molecular Biology Graduate Committee, Dartmouth College
Professor of Microbiology, Dartmouth Medical School
Visiting Professor, University of California, Riverside
Professor, University of Tennessee - Oak Ridge

Botany (4)

Mohr, Hans - Visiting Professor: Plant Physiology

University Studies from 1950 to 1956
Doctoral work, University of Tubingen, Germany
Assistant Professor, University of Tubingen
Associate Professor, University of Tubingen
Professor & Head of Department, University of Freiburg

Moir, David Ross - Visiting Professor: Morphology, Phytogeography

B.Sc., University of Manitoba
M.Sc., University of Manitoba
Ph.D., University of Minnesota
Assistant Professor, North Dakota State University
Associate Professor, North Dakota State University
Professor, North Dakota State University
Professor and Chairman of Botany Department, Brandon University
Dean of Science, Brandon University

Botany (continued)

Rubinstein, Bernard - Assistant Professor: Plant Physiology

B.S., Michigan State University
M.S., Purdue University
Ph.D., University of California, Berkeley
Post-doctoral Fellowship, MSU/AEC Plant Research Lab.

Swanson, Carl P. - Professor: Cytology

B.S., Massachusetts State College
M.A., Harvard University
Ph.D., Harvard University
Post-doctoral Fellowship, University of Missouri
D.Sc., University of Massachusetts (Honorary)
Assistant Professor, Michigan State University
Associate Professor, Johns Hopkins University
Professor, Johns Hopkins University
Visiting Professor: University of Texas, Indiana, New Hampshire, and Washington State University

Geology/Geography (2)

Doehring, Donald O. - Assistant Professor: Geomorphology

A.B., University of California, Berkeley
M.A., Claremont Graduate School, Pomona College
Ph.D., University of Wyoming
Visiting Assistant Professor, Pomona College
Visiting Assistant Professor, Washington & Lee University
Post-doctoral Fellow, S.U.N.Y. at Binghamton

Morse, Stearns Anthony - Associate Professor: Igneous Petrologist Geochemist

A.B., Dartmouth College
M.Sc., McGill University
Ph.D., McGill University
Assistant Professor, Franklin & Marshall College
Associate Professor, Franklin & Marshall College
Associate Director, Geology Graduate Program, Franklin & Marshall College

Mathematics/Statistics (10)

Adams, Donald H. - Assistant Professor: Functional Analysis

B.A., University of New England (Australia)
Ph.D., Monash University (Australia)
Lecturer, Monash University

Mathematics/Statistics (continued)

Fogarty, John - Associate Professor: Algebraic Geometry

B.A., Harvard University
Ph.D., Harvard University
Instructor, University of Pennsylvania
Assistant Professor, University of Pennsylvania

Gauger, Michael A. - Assistant Professor: Lie Algebras

B.S., University of Notre Dame
Ph.D., University of Notre Dame

Jones, Ralph J. - Assistant Professor: Topology

B.A., University of Missouri
M.A., University of Missouri
Ph.D., University of Wisconsin

Mandelbaum, Richard - Assistant Professor: Complex Analysis

B.S., Rensselaer Polytechnic Institute
A.M., Princeton University
Ph.D., Princeton University
Assistant Professor, Neward College of Engineering

Manes, Ernest G. - Assistant Professor: Category Theory

B.S., Harvey Mudd College
Ph.D., Wesleyan University
Assistant Professor, Harvey Mudd College
Assistant Professor, University of Hawaii
Killam Postdoctoral Fellow, Dalhousie University, Canada

Morash, Ronald P. - Assistant Professor: Orthomodular Lattices

A.B., Boston College
M.A., Boston College
Ph.D., University of Massachusetts

Norman, Peter A. - Assistant Professor: Algebraic Number Theory

B.A., Harvard University
Ph.D., University of Pennsylvania

Rosenkrantz, Walter A. - Associate Professor: Probability

B.S., University of Chicago
B.A., University of Chicago
M.S., University of Illinois
Ph.D., University of Illinois
John Wesley Young Research Instructor, Dartmouth College
Assistant Professor, Washington Square College, NYU
Associate Professor, Washington Square College, NYU

Mathematics & Statistics (continued)

Wattenberg, Franklin A. - Assistant Professor: Mathematical Logic & Algebraic Topology

B.S., Wayne State University
M.S., University of Wisconsin
Ph.D., University of Wisconsin
Benjamin Peirce Assistant Professor, Harvard University

Microbiology (2)

Norkin, Leonard C. - Assistant Professor: Animal Cell Virology

B.S., Rensselaer Polytechnic Institute
Ph.D., Columbia University
Post-doctoral Fellow, Department of Viral Oncology, Public Health Research Institute of the City of New York

Reiner, Albey M. - Assistant Professor: General Microbiology

B.S., Princeton
M.Sc., University of Wisconsin
Ph.D., Harvard University
Post Doctoral, Hebrew University, Jerusalem, Israel
Post Doctoral, University of California, Berkeley
Phi Beta Kappa

Physics & Astronomy (5)

Holstein, Barry R. - Assistant Professor: High Energy Theory

B.S., Carnegie Institute of Technology
M.S., Carnegie Institute of Technology
Ph.D., Carnegie-Mellon University
Instructor, Princeton University

Manchester, Richard N. - Assistant Professor: Radio Astronomy

B.S., University of Canterbury, New Zealand
Ph.D., University of Newcastle, Australia
Research Organization, Division of Radio Physics, Australia
Research Associate, National Radio-Astronomy Observatory, W. Virginia

McMahan, Andrew K. - Assistant Professor: Solid State Theory

B.A., Amherst College
Ph.D., University of Minnesota
Phi Beta Kappa

Tademaru, Eugene - Assistant Professor: Plasma Astrophysics

B.S., University of Illinois
Ph.D., University of Chicago
Research Associate, National Radio Astronomy Observatory, Charlottesville, Virginia

Physics & Astronomy (continued)

Whitney, Randy, R. - Assistant Professor: Experimental Nuclear Physics

B.A., University of Oregon Honors College
Ph.D., Stanford University
Phi Beta Kappa

Zoology (5)

Dersham, George H. - Assistant Professor: Neurophysiology

B.A., University of Colorado
M.A., University of Colorado
Ph.D., University of Oregon
Research Associate, University of Oregon

Levin, Bruce R. - Associate Professor: Genetics/Population Biolog

B.S., University of Michigan
M.S., University of Michigan
Ph.D., University of Michigan
Assistant Professor, Brown University

Searcy, Dennis G. - Assistant Professor: Molecular Biology, Developmental Biology; Invertebrate Zool.

B.S., Oregon State University
Ph.D., University of California, Los Angeles
Post-doctoral Trainee, U.C.L.A.
Post-doctoral Fellow, California Institute of Technology

Shapiro, Harriet - Lecturer: Genetics

B.S., Brooklyn College
M.S., New York University
Instructor in Biology, Sarah Lawrence College
Instructor in Biology, University of Oregon
Instructor in Biology, Westfield State College
Assistant Professor, Biology, Westfield State College

Stuart, Alastair, M. - Professor: Animal Behavior

B.Sc., University of Glasgow
Ph.D., Harvard University
Assistant Professor, University of Chicago
Associate Professor, North Carolina State University

ANNUAL REPORT

1970 - 1971

SCHOOL OF BUSINESS ADMINISTRATION

UNIVERSITY OF MASSACHUSETTS/AMHERST

TABLE OF CONTENTS

	Page
PREFACE	1
STATISTICAL INFORMATION	
1. Appropriations	5
2. Personnel	5
3. Organization Chart	6
4. Students Served	7
ACTIVITIES AND PLANS	
5. Faculty Activity	8
6. Major Accomplishments	9
7. Special Programs	9
8. Future Plans and Needs	13
APPENDICES: Grants, Research and Faculty Activity (Excerpts from Departmental Reports)	
A. Department of Accounting	16
B. Department of General Business & Finance	22
C. Department of Management	35
D. Department of Marketing	41
E. Center for Business & Economic Research	50
F. Business Advisory Council	61

ANNUAL REPORT, 1970-1971

SCHOOL OF BUSINESS ADMINISTRATION

UNIVERSITY OF MASSACHUSETTS

WENDELL R. SMITH, DEAN

PREFACE

During the 1970-1971 academic year, the Administrative Committee of the School of Business Administration developed an updated statement of the goals and activities of the School. A portion of this statement is included here as a preface to the 1970-1971 Annual Report since it identifies guidelines for the continued development of the School.

I. GOALS OF THE SCHOOL OF BUSINESS ADMINISTRATION

The activities of the School of Business Administration are directed toward development of the understandings and capabilities necessary for effective management and operation of business firms and other complex organizations in the private, non-profit and governmental sectors of the socio-economic system. The goals of the School can be defined more specifically as they relate to the primary activities of the School -- instruction, research, and service.

Instruction (Undergraduate and Masters Levels)

In its modern context, instruction consists of teaching and other activities designed to enable students to learn. Through effective programs of instruction, the School seeks to prepare students for meaningful careers in management and administration. Emphasis is upon building a foundation for the continuing program of learning and development that is essential to effective contribution in an environment characterized by accelerating change.

Instruction (Ph.D. Level)

The objective of the Doctoral Program is to prepare selected students to perform effectively as teachers and/or administrators in dynamic institutions by means of programs designed to build competence in research and learning oriented toward the planning, operation and control of business firms and related complex organizations.

Research

To conduct research related to:

1. The enrichment of instruction in relevant disciplines.
2. Maintaining and enriching the competence of the faculty.
3. Contributing to the development of established and emerging disciplines; and to do this in such ways as to reflect credit to the researcher and to the School.

Service

1. To contribute to the development of close ties between the University and those elements of its constituency that identify with the mission that the School seeks to achieve.

2. To contribute to the general welfare by applying the special capabilities of the School's faculty to the solving of pressing socio-economic problems, specifically to participate fully in programs, such as ABLE, designed to develop minority group students for effective careers in business and related areas of management and administration.

3. To serve the University internally by involvement in its problems of management and administration.

4. To offer continuing education programs designed to maintain and enhance the competence of non-student participants.

The following guidelines are applicable to the four major activities of the School.

Instruction

1. Challenge and motivate undergraduate and graduate students to excel.
2. Offer courses and programs that are abreast of the most recent knowledge.
3. Encourage students to develop the ability to engage in independent and creative thinking and to obtain knowledge of progress toward professional development in forms that have diagnostic value for self-improvement.
4. Establish a foundation for career-long professional growth and development.

Research

Provide the necessary faculty and support for graduate programs by developing and maintaining:

a. A research environment capable of attracting the number and types of faculty necessary to guide and direct the research efforts of quality graduate students.
b. A research program that will generate financial support adequate to fund research activities associated with the target size of the graduate programs.

Publication

1. Achieve and maintain a flow of scholarly publications sufficient to attract the number and quality of prospective new faculty and graduate students consistent with the target size of the School's graduate programs.

2. Since the University desires to establish itself both nationally and internationally as a first-rate institution of higher learning, all schools and divisions of the University should contribute to this end by encouraging faculty to publish scholarly works within their respective fields.

Service

1. Concentrate upon those service activities which require the special skills and knowledge identified with business faculty and in which business faculty can make unique contributions because of their expertise. Among these services are the following:

a. Finding solutions to management and administrative problems within the University structure.

b. Designing and offering continuing education programs in the field of business and administration.

c. Contributing to the solution of socio-economic problems.

STATISTICAL INFORMATION

1. Appropriation for the Fiscal Year:

Code	1968-1969	1969-1970	1970-1971
03	$31,600.00	$29,900.00	$45,000.00*
10	19,000.00	8,000.00	9,000.00
12	1,823.77	1,500.00	1,500.00
13	10,000.00	11,000.00	12,000.00
14 (14-1)	12,400.00	12,100.00	12,100.00
15	3,000.00	2,700.00	3,000.00
16	1,500.00	1,450.00	1,000.00

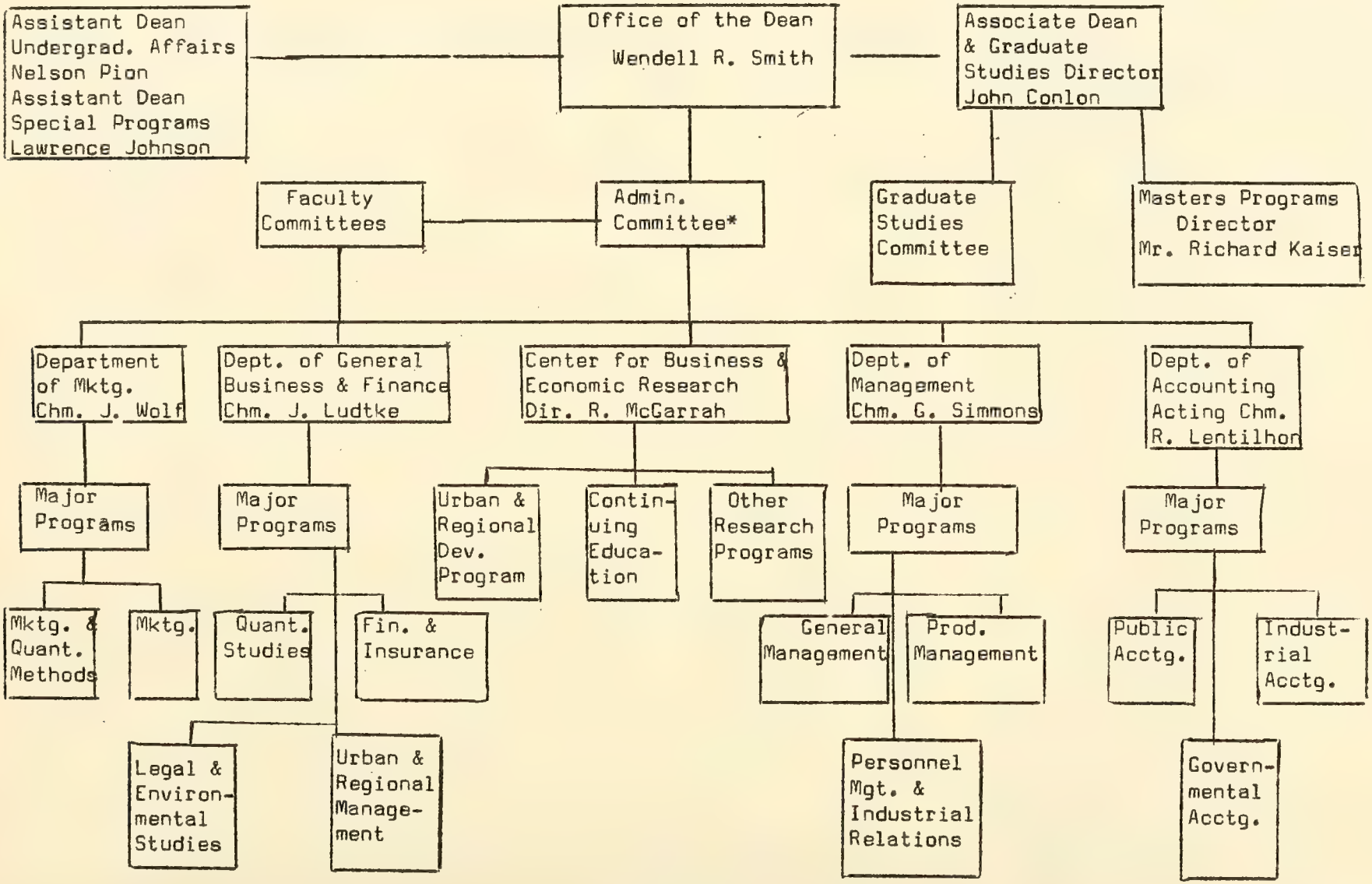
2. Personnel: Number in Each Rank

	As of September		
	1968	1969	1970
Professors	18	19	19
Associate Professors	18	19	21
Assistant Professors	17	22	28
Instructors	2	4	5
Lecturer	3	3	2
Total Faculty (excluding Dean)	58	67	75

NOTE: These figures include faculty on leave of absence:

One Professor, One Associate Professor, and One Assistant Professor in 1968.
One Assistant Professor in 1969.
One Professor and One Associate Professor in 1970.

*Includes special allocation ($15,000) for summer faculty research not included in previous years.



*Includes the Dean, Associate Dean, Department Chairmen, and Director of the Center for Business & Economic Research.

4. Students Served:

(a) Juniors and Seniors by Major	As of September 1968	1969	1970
Accounting	154	170	184
General Business & Finance	164	214	200
Management	199	191	165
Marketing	154	212	209
Undeclared Juniors*	109	154	166
TOTAL	778	941	924
Sophomores*	462	365	282
Freshmen*	325	229	253
Graduate Students on Campus	104	143	196
TOTAL SBA Students on Campus	1699	1678	1655
Graduate Students at Pittsfield	58	35	25

*Students select major not later than the end of the first semester of the junior year. Statistics on Freshman and Sophomores are not reliable because of frequency of changes in School affiliation.

(b) Number of Students Taught (Majors & others--class enrollments)	3891	4485	4879

Upper division undergraduate and graduate programs have continued to grow in spite of the fact that standards have been raised. Some of the fall off in freshman and sophomore identification with SBA is attributable to an increase in mathematics requirements necessitated by the growing significance of quantitative analysis in the business disciplines. To date, this has been offset by transfers to SBA from the community colleges and from other U. Mass. Schools and Colleges. Additionally, more and more business courses are being elected by majors in non-business areas of the University.

ACTIVITIES AND PLANS

5. Faculty Publications, Research Grants, Research Projects and Other Professional Activities

The members of the faculty of the School of Business Administration continue to be highly productive from the point of view of publications and related activities. The record for 1970-71 is as follows:

Articles Published or accepted for publication	-- 51
Books Published	-- 7

This is a conservative view of the publications output of the School. It takes into account only articles appearing in recognized professional or academic journals; and is limited to contributions that have been published, or barring some unforseen development, will be published. Other manuscripts are in various stages of preparation. Details regarding publications, research and research grants are to be found in the Appendix of this report.

The faculty and staff of the School of Business Administration continues to become more visible on the State, New England, and National and International scenes. The reports of the departments and the Center for Business and Economic Research (Appendicies A through E) provide documentation on this point.

The Dean's activities in this area have included continuing as consultant to the Secretary of Commerce as a member of the Executive Committee of the National Marketing Advisory Committee. Additionally he serves on the Editorial Board of the Journal of Marketing, the Masters Accreditation Committee of the Association of American Collegiate Schools of Business, the Board of Trustees of the Marketing Science Institute and the Business Advisory Council of Springfield Community College. He has appeared before business groups in the United States, Japan and Switzerland.

The Majority of SBA senior faculty members, and a growing percentage of younger faculty, are well recognized by their professional groups. Several hold offices in their associations. Many are active on committees of various sorts. John Conlon, Associate Dean and Director of Graduate Studies, continues to be active in the area of mediation and arbitration of labor disputes. Assistant Dean Lawrence Johnson is much in demand as a speaker before groups, such as the American Management Association, with reference to problems in providing education and training for the disadvantaged.

The faculty of the School of Business Administration continues to be called upon for substantial participation in University-wide activities. Many are effectively involved in University committees. Several are serving the University as consultants.

6. Major Accomplishments and 7. Special Programs

Faculty recruiting activities this year were highly successful. Next fall we will welcome new faculty members from Syracuse, Wisconsin, Harvard, Stanford, and MIT. Faculty members of this quality properly assume the availability of adequate travel funds and support services to retain the cutting edge of their professional competence and to make their capabilities fully available to their students and colleagues of the University of Massachusetts. If decline in support in these areas continues, we will be disadvantaged from a recruiting point of view and will lose highly capable faculty members who have cast their lot with us over the last several years.

During the year, the Undergraduate, Masters, and Doctoral Programs of the School of Business Administration were reviewed in some detail. Relatively minor changes were made, Additionally, programs leading to the degree of Master of Science in Administration were consolidated.

Program ABLE (Accelerated Business Leadership Education) for disadvantaged Masters candidates, which was developed by Assistant Dean Lawrence Johnson and a sizable group of faculty volunteers, became operational in June, 1969. Experience with the ABLE students has been good, and a third group is now on campus. The program is funded by industry and by EDA.

The JET (Junior Executive Training) Program that SBA operates in cooperation with the Experiment in International Living continues to be one of our most satisfying activities. The young people involved (both men and women) come primarily from Switzerland and nearby Western European countries. However, the group this year includes representatives from Ceylon, Mexico and Argentina. During the last week in August, we will hold our third "JET Refresher" Program which will be a one-week seminar for alumni of the JET Programs to be held in Flims, Switzerland. This activity is self-funding.

Under the leadership of Dean Conlon, another successful Arbitration Conference was held on the campus this year. During the year the School of Business Administration and its Center for Business and Economic Research launched an expanded program of service activities. Among these were:

> Under the leadership of Professor Wortman, the School of Business Administration sponsored a series of Manpower Planning Conferences designed for CAMPS Committee members and others. These were held both on and off the Amherst campus.
>
> Professor Hartzler and his MBA seminar students provided managerial and planning assistance to non-profit social action groups in Western Massachusetts.
>
> The "law group" was involved, both individually and as a team in providing legal assistance to both on-campus and off-campus groups.
>
> The Marketing Department was host to the annual meeting of the Association for Consumer Research.

Under a grant from the U. S. Department of Commerce, Mr. Liander directed the activities of Graduate Students who were providing assistance to Massachusetts firms interested in export expansion.

Two "business - student confrontations" were held during the year. The first was a follow-up of the Wall Street activities which were a part of last Spring's student strike. Henry Loeb and the Senior Economist from Loeb and Rhoades Company met with students during the fall. In May representatives of General Foods were on campus to discuss the social responsibilities of business firms with interested students.

Professor Buell served as coordinator for a special Management Seminar conducted for HEW personnel. Session leaders and speakers included Professors Carlisle, Simmons, Wortman and President Wood.

A comprehensive review of other activities involving the Center for Business and Economic Research is to be found in Appendix E.

The SBA Business Advisory Council held two meetins on the campus. New members appointed this year are:

Mr. Everett Frank, Jr.
Vice President
Scott Graphics, Inc.
Holyoke

Mr. Louis Oldershaw
President
National Blank Book Co.
Holyoke

(See Appendix F. for complete list)

8. Future Plans and Needs

It seems quite clear that one of the most serious problems confronting the professional schools on the Amherst campus of the University has to do with the inadequacy of funds for support activity and for the development of teaching, research and service programs that are essential if we are to render optimum service to the Commonwealth. While it is clear that the University is still obligated to grow in order to provide opportunities for the youth of the Commonwealth, somehow it must be understood that this cannot be done unless the secretarial, research, and administrative support that is necessary is made available. At the present time, far too many faculty members find it necessary to type their own correspondence or to have it handled at their own expense outside of the School. Deans, Directors and Department Chairmen spend hours of valuable time in the handling of reports and records that should be handled by administrative assistants. This misallocation of effort leaves undone many things that are critical to the achievement of the development goals of the University.

Professional Schools are especially hurt by the paucity of travel funds. The "laboratory" of the School of Business Administration is not on campus as is true of many disciplines. Rather, it is in the "real world" of commerce, industry, and non-profit and governmental institutions. Access to this laboratory is essential if relevent programs are to be developed and maintained. This is critical in support of effective teaching, useful research and noteworthy public service.

The School of Business Administration will continue to make changes designed to communicate and implement the expanding role that is being played by what have been traditionally called "business schools" across the country. Whereas most of such schools began in the 1920's with an almost exclusive concern with preparing students for business careers, this is no longer the case. Our accrediting

organization, the American Association of Collegiate Schools of Business, now identifies the goal of its member institutions as the "Preparation of students for the administration of business firms and other complex organizations." This is to say that the competence developed in a Collegiate School of Business Administration has increasing applicability to the management of non-profit institutions, educational institutions, and governmental organizations as well as business firms per se.

This evolutionary broadening of focus, is an established fact; but the image of business schools held by the general public and by many students still reflects the older orientation.

Several of the accredited schools in the New England area and elsewhere have responded by a change of name. The School at Boston College, for example, is now officially called the "Graduate School of Management." The same is true of the School at Northwestern, while Ohio State has reorganized as The College of Administrative Science. These changes of name are not without their disadvantages. They tend to suggest to the business community a movement away from the needs and problems of the private sector. We will probably recommend a less dramatic change and suggest that our present School of Business Administration be identified at the undergraduate level as the School of Business and Administration and at the graduate level as the Graduate School of Management and/or Administration.

Attention is also being given to the development of a one-semester freshmen-sophomore course that might carry some such title as "Business and Society." The purpose of this course would be to counter the notion that many students have that the business firm is essentially an anti-social or non-social institution, to analyze it critically in view of the environment of the present and prospective future, and demonstrate the usefulness of management competence in non-business areas.

In the Spring of 1968, a Planning and Development Task Force was established within the School of Business Administration. The Task Force was made up primarily of people in administrative positions with broad faculty participation being provided for by the holding of open meetings. The objective of this activity was primarily diagnostic in nature. Its major accomplishment was that of defining and stimulating discussion of important issues and problems rather than that of providing a blueprint for future operations. Early in 1971 the Task Force was discharged and a summary report placed in the hands of a newly created SBA Planning Committee. The members of this Committee are Professor Joseph Litterer of the Department of Management, Associate Professor Eugene Kaczka of the Department of General Business and Finance and Associate Professor Kent Monroe of the Marketing Department. Members of this Committee were chosen in part because of their familiarity with effective planning and programming procedures. I regard this group to be a standing committee who will work with me and the faculty toward the general improvement of the school from the point of programs, organization, outreach and related matters. While this Committee has been in existence only a short time, it has already come up with extremely useful suggestions in many areas.

During the next fiscal year we hope to accomplish the following:

1. Intensify out interaction with alumni of various programs of the School of Business Administration.

2. Increase our communication with alumni and with the business community of the Commonwealth by issuing a newsletter on a quarterly basis. This publication will call attention to the capabilities of the School and its desire to interact more effectively with its off-campus constituency.

3. In cooperation with the School's Undergraduate Student Advisory Council and the Graduate Business Club, to launch an expanded program of professionally oriented extracurricular activities.

Early in 1971, the faculty of the School of Business Administration elected a Committee to conduct a review of the organization and program of the Center for Business and Economic Research. The report of this committee was submitted to the faculty which adopted most of the recommendations that were made. One of significance called for the separation of responsibility for continuing education from the Center, and the designation of a Director of Continuing Education activities who will be reporting directly to the Dean and to the faculty. It was the Review Committee's thought that, with the limited resources available to the Center for Business and Economic Research, better results would be obtained if its focus were more narrowly defined.

It is to be hoped that budgetary support for the Center's activities can be increased substantially. The Center has a strong potential for accelerating the University's involvement in outreach and public service activities. (see Appendix E) However, it is not realistic to expect this potential to be realized unless specific budgetary allocations are made in the support of this activity.

The School of Business Administration looks forward to its involvement in some of the challenges of what Peter F. Drucker has called "The Surprising 70's". In his article appearing in the July 1971 issue of Harpers Magazine, Professor Drucker indicates that, "Productivity will be a major challenge and a major concern of the next ten years." The enhancement of productivity is, in many respects, the major mission of a School of Business Administration.

As this reporting period draws to a close, it becomes clear that we will be experiencing substantial growth in our Masters Programs. A tighter job market, returning veterans from Southeast Asia, the growing reputation of the School, and the increasing costs of attending private institutions combine in producing more highly qualified applicants than ever before. We accept this challenge with enthusiasm.

Appendix A

Department of Accounting - Robert Lentilhon, Acting Chairman

4. a. Number of majors, September 1970 -- 184

b. Number of students taught

September, 1968 -- 1344
September, 1969 -- 1387
September, 1970 -- 1333

5. Faculty Publications in the Period:

Articles:

Morton Backer:

"American Accounting Association Report of Committee on Managerial Accounting," The Accounting Review, Supplement to Vol. XLV, 1970 (as a member of the Committee), pp. 1-9.

"Financial Reporting and Security Investment Decisions," Financial Analysts Journal, Feb. 1971.

"Summary of Findings of NAA Study on Financial Reporting," New York CPA, Jan. 1971.

John Burch:

"Application of Computers to Contribution Analysis," Journal of Systems Management, Vol. 21, #8, 112, Aug. 1970, pp. 20-23.

A. Wayne Corcoran:

"Financial Statements - Who Needs Them," Financial Executive, Vol. XXXVIII, No. 8, Aug. 1970, pp. 34-47. (With Wayne E. Leininger).

Anthony T. Krzystofik:

Six editorials in the Mass. CPA Review.

Wayne E. Leininger:

"Financial Statements - Who Needs Them", (with A. Wayne Corcoran), Financial Executive, Aug. 1970, Vol. XXXVIII, No. 8, pp. 34-47.

Primary contributor in areas of economic feasibility, a simulation modeling, cost estimation and budget system design in: "A Feasibility Study on the Model Elementary Teacher Education Program," Phase II, Office of Education, National Center for Educational Research and Development, Contract #OEC 0-9-310417-4040 (010) pp. 457-531 and 533-539.

Robert W. Lentilhon:

"Some Responses of State Boards to Questions About the CPA Examination," Massachusetts CPA Review, May-June, 1971.

Monograph:

Donald E. Stone:

A Statement of Basic Auditing Concepts - monograph of AAA Committee on Auditing Concepts (Vice-Chairman of Committee) to be published by the AAA in July, 1971.

Research Grants and/or Projects:

Morton Backer (with Richard Simpson) "Valuation Reporting," a major study for the Financial Executives Institute to be completed in 1972 and published as a book.

Wayne E. Leininger - in progress, with M. William Frey: "The Influence of Open and Closed Belief Systems on Cooperation in the Prisoner's Dilemma." Experiment complete; in final writing stage.

Thomas A. Morrison - Financial Controls for International Operations - for the National Association of Accountants.

Richard Simpson (with Morton Backer) "Valuation Reporting," a major study for the Financial Executives Institute to be completed in 1972 and published as a book.

Frank A. Singer - Project funded by the Region 1 Office of Educational Research, "Self-Instructional Materials for Topics in Elementary Accounting - A Means to the Demonstration of Pay-offs from Individualizing Time-to-Complete."

Donald E. Stone:

"Simulation of Financial Statements: A Valuable Learning Experience," research completed and in process of writing manuscript for submission to Accounting Review.

"Toward a Managerially-Oriented Governmental Accounting Course," drawn from course experience in the Spring '71 term and the paper presented at the AAA meeting in Rhode Island in April 1971.

"Applicability of Contemporary Managerial Accounting Concepts and Techniques in the Non-Profit Sector," (with Gerald Zeisel).

Gerald Zeisel:

"Applicability of Contemporary Managerial Accounting Concepts and Techniques in the Non-Profit Sector," (with Donald E. Stone).

Other Professional Activities:

Papers Delivered:

Roy Ageloff: (with A. Wayne Corcoran), "Challenges and Rewards of Computer Software - A Financial Emphasis," at the regional and national meetings of the American Accounting Association.

Morton Backer: "Reporting for Diversified Companies" NAA regional meeting.

"Financial Reporting for Security Investment and Credit Decisions," NAA Regional meeting, Chicago, Illinois.

"Quantitative Data in Decision Making," Springfield Chamber of Commerce.

A. Wayne Corcoran: (with Roy Ageloff), "Challenges and Rewards of Computer Software - A Financial Emphasis," at the regional and national meetings of the American Accounting Association.

Ula K. Motekat: Speech against Price-Level Adjustments, given at the 30th Joint Annual Meeting of the American Woman's Society of CPAs and the American Society of Women Accountants, New York, September 17, 1970.

Donald E. Stone: "Information for Manufacturing Planning and Control," given at Manufacturing Markets Seminar, Dartmouth College, July 14, 1970.

Donald E. Stone: "Interim Report on Auditing Concepts" a round table presented at the AAA annual meeting, Univ. of Maryland, August 1970.

"Application of the Computer in Accounting Instruction," at the Symposium in Accounting Education: Developments in Teaching Techniques, Univ. of Missouri, Feb. 12, 1971.

"Social Responsibility in Accounting," (with Gerald Zeisel) at the Northeastern Regional meeting of the AAA, Univ. of Rhode Island, April, 1971.

"Financial Statement Simulation in Elementary Accounting," at the Ohio Regional meeting of the AAA, Ohio State Univ., May 1, 1971.

Gerald Zeisel: "Social Responsibility in Accounting," (with Donald Stone) at the Northeastern Regional meeting of the AAA, Univ. of Rhode Island, April, 1971.

National, State and Other Outside Committee Memberships:

John Anderson - member of the Mass. Society of CPAs Education Committee.

Morton Backer - member of Managerial Accounting Committee of the American Accounting Association; Research Project Committee of the National Association of Accountants; Aid in Grants Committee and Lybrand Awards Committee.

Anthony Krzystofik - Editor of Mass CPA Review.

Thomas A. Morrison - member of Program Committee for the 22nd Annual Meetings of the Northeast Regional Group of the American Accounting Association held April 17, 18, 1971.

Ula K. Motekat - Associate Editor, The Woman CPA.

Frank A. Singer - Member of the Advisory Committee to the Director of Education of the American Accounting Association.

Donald E. Stone - Vice Chairman of Auditing Concepts Committee of the American Accounting Association. On the Editorial Board of The Accounting Review, re-appointed for 1971-72.

6. Major Accomplishments:

Considerable attention was paid to curriculum matters and the undergraduate Curriculum Committee was particularly active. The Department renumbered all of its undergraduate offerings to provide students with some guidelines as to sequencing of courses and to build in flexibility for future offerings. The Undergraduate Curriculum Committee currently has three new course proposals for 1971-72 action: a new tax course, an advanced theory course, and a course in international accounting. The latter two are the result of trial sections as independent study conducted by Professors Simpson and Motekat. A very different approach to the first course in accounting is to be implemented this Fall.

On the graduate level, the Department, under the leadership of Professor Morrison, revised its M.S. in Accounting offerings, sent a new flier to a great many colleges where students might evidence interest in our program, and as a result has more than 20 new graduate students accepted for this Fall.

This year the Department sought to improve its relations with the state's community colleges and with the public accounting firms recruiting on our campus. To this end, a very successful one-day seminar was held in December, 1970 at the Campus Center with representatives from 11 community colleges present. Many issues of mutual interest in accounting and business were discussed and plans made to make this an annual affair for the exchange of information and ideas.

Thanks to the generosity of Ernst & Ernst and Touche, Ross, representatives from ten public accounting firms and the General Accounting Office were our guests for lunch on the days they came to campus to recruit. Many faculty members participated and again there was excellent exchange of ideas and discussion of mutual problems. We regard this as "missionary work" with the firms. Most of these firms have charitable foundations which aid colleges and universities in other parts of the country. It is our hope that when the current recession is ended they will think of us in terms of scholarships, library support and faculty grants. Already Arthur Anderson and Co. has designated a University graduate in its employ to solicit gifts for the University to be matched dollar for dollar by the firm.

We are also anxious to have the Department become better known nationally and regionally. With Professor Krzystofik as a valued member of the organizing committee, the annual New England Graduate Accounting Study Conference was held at the Campus Center, September 9-11, 1970. Communications have been exchanged with the American Accounting Association relative to hosting its annual meeting in 1976 on our campus. We have also corresponded with the Association's Education Director relative to conducting one of its courses on our campus in 1972. This summer the American Institute of CPAs is conducting two of its training sessions on our campus.

7. Special Projects or Programs:

The Department is offering for the first time CPA Preparation in the evening as part of Summer School, 1971. Instruction will be offered in all four parts of the CPA examination by Department faculty members who are CPAs. Notices of this course were sent to all public accounting firms in Western Massachusetts and adjacent parts of Connecticut, New Hampshire and Vermont. In addition, an advertisement was placed in the May/June issue of the Massachusetts CPA Review. At present we have upwards of 40 potential participants excluding regular University Summer School students. We hope to make this an annual program.

APPENDIX B

Department of General Business and Finance, James B. Ludtke, Head

4. Students Served:

	September 1968	September 1969	September 1970
a. Number of Majors	111	237	200
b. Number of Students Taught	1341	1508	1373

The decline in the number of students taught is explained primarily by the deletion of one of the Department's course offerings from the SBA core and by an apparent temporary decline of student interest in insurance and quantitative courses. We continue to believe that both of the latter areas offer considerable potential for the future. It is of interest to note that the number of students taught in the second semester was 1,623, a new all-time high for the Department. The higher rate of growth in the number of students taught has been experienced in the courses taught in the areas of law, environment, and real estate. There appears to be a growing interest in the law and environment area, as evidenced by seven students who have selected this as their area of concentration in the undergraduate program. Perhaps the time is coming for the Department to propose a formal undergraduate program in this area. An increasing number of our students are pursuing independent study as a part of their programs.

5. Curriculum Development and Instructional Activity:

New courses were offered for the first time in virtually all of the areas in the Department with favorable results. The M.S. Program in Urban and Regional Studies (Administration) was further refined and hopefully this program will be launched next fall. A considerable portion of the time of Professors Burak, Plattner, and Rivers was devoted to this project. During the year, the Department increased its level of cooperation and joint offerings with the Department of Industrial Engineering and Operations Research. Also, considerable progress was made on the development of interdisciplinary courses involving the Water Resources Center and the Department of Forestry and Wildlife Management. Professor Bonsignore provided the leadership leading to the development of a law community at U/Mass and among the other four colleges, and this development can be expected to influence future curriculum development. Listed below are some specific illustrations of innovations and developments that may be of interest to the School.

The fact that not all members of the Department are singled out should not reflect in any way upon any member of the faculty. Many faculty are in the second and third years of revised and innovative approaches to their courses. The important point is that the Department does regard teaching as its primary responsibility and all members of the Department are attempting to maintain and upgrade their effectiveness as teachers. The Department selected Sam Goldman as its nominee for an Outstanding Teacher Award.

(1) Bill Belovicz developed an experimental course in conjunction with the Department of Forestry and Wildlife Management (Mathematical Techniques in Resource Management). Although the enrollment was small, considerable experience was gained by both Departments and two research projects were launched as a result of this experiment in interdisciplinary instruction.

(2) Pao Cheng introduced bi-weekly reviews in his junior level courses in an effort to measure more accurately the degree of learning and to bring a larger number of students up to a desired level of performance by the end of the semester. The program will be extended to additional sections next year.

(3) King Deets completed construction of computer tape containing daily price observations of 20 stocks over a 20-year period and introduced this research tool in his course, making possible student application of various research techniques and investment strategies.

(4) Peter d'Errico and Ethan Katsh experimented with student-run small group meetings as supplements to the regular class meetings, as a means of dealing with heavy enrollment.

(5) Sam Goldman and Ethan Katsh experimented with videotape work in their courses.

(6) Richard Hartzler involved students enrolled in the MBA Seminar course in various forms of field work involving non-profit social action organizations. The participants discovered a paucity of managerial talent in many of the agencies and only nominal involvement of existing firms in programs aimed at improving management. These agencies appear to be a potential source of demand for qualified and interested graduates of MBA programs.

(7) Grant Osborn introduced for the first time, programmed learning in the life insurance courses to facilitate the students' rate of learning application of quantitative techniques to certain aspects of life insurance.

(8) Robert Plattner made considerable progress on the development of a computer-based game to be used in a housing course. This game simulates growth in economic activity and changing land use.

(9) Robert Rivers developed and used for the first time a slide presentation in conjunction with the historical and technical development sections of the basic transportation course.

(10) The Department hosted two business-student confrontations as a follow-up to the activities of last spring. Henry Loeb and the senior economist from Loeb & Rhodes Company of New York City spent a full day with students during the fall semester, and four representatives from General Foods were on campus for one day in May to talk with students about social responsibility and related matters.

(11) The law faculty under the leadership of Professors Katsh and d'Errico introduced for the first time a film series as part of the introductory law course. The success of the experiment prompted the group to expand the film series to seven films and to incorporate the program into the formal lab fee structure.

(12) Professors Katsh and d'Errico supervised Independent Study consumer surveys and research of local businesses. Professor Katsh supervised independent study of migrant workers. Professor d'Errico supervised independent study of dormitory self-government and administration.

(13) Forty-four students were enrolled in Independent Study in the second semester, with much of the enrollment in areas of interest taught by law faculty. As a part of this activity, Professor Bonsignore developed an experimental course combining law and literature.

6. Research:

The Department continues to be involved in various research projects, as evidenced by the number of publications and articles currently under review.

A noteworthy development has been the movement toward interdisciplinary research on the part of many of the faculty. Professors Bonsignore, Balintfy, Belovicz and Kaczka are cases in point. Also, it should be noted that six of the Departmental faculty received financial support from the Faculty Research Council and that six of the faculty received grants to facilitate research this coming summer.

7. Publications:

The publication activity in the Department is summarized in a detailed listing of scholarly writing, either published or accepted for publication. Thirteen articles were published during the year and an additional eight articles have been accepted for publication in forthcoming issues of scholarly journals.

8. Working Papers and Scholarly Writing Currently Under Review by Editors of Scholarly Journals:

Additional tangible evidence of scholarly activity of the Departmental staff is in the form of working papers and completed articles currently under review. As of June 1, the faculty have approximately fifteen articles under review and numerous working papers in circulation. Much of this completed work can be expected to lead to publication in the future.

9. Presentation of Scholarly Papers:

During the year the faculty presented seven scholarly papers. Many of the faculty also delivered talks to various groups, both on and off campus.

10. Attendance at Professional Meetings, Conferences, and Seminars:

Attached is a detailed listing of the various meetings, conferences and seminars attended by one or more of the Departmental faculty. Travel was financed from a variety of sources, including the 10 funds allocated by the Dean to the Department, SBA Service Fund, Faculty Research Grants, Contract Research, and private funds. Although the list is rather long, there were meetings at which the Department should have been represented but the unavailability of funds prevented faculty attendance.

11. Public Service, including services for which there was remuneration:

Perhaps the most significant development this past year has been the increased involvement of faculty and students in public service activities. Much of this has developed initially through instructional activity, and now appears to be forming a base upon which both faculty and students will be able to provide highly valuable services through selective research and service activities.

12. Administrative Services to U/Mass:

Another significant development has been the increased involvement of both our faculty and students in the problems related to the administration of a large, complex campus. The Administration has become aware of the value of the expertise of persons knowledgeable in the area of administration. The involvement of the faculty in judicial procedures, budgeting, health practices, and programs for the disadvantaged are particularly noteworthy.

13. Faculty Resources:

The Department is highly pleased with the performance of its four new junior faculty (Choate, d'Errico, Katsh, and Kumar) and its new senior faculty member (Balintfy). All of the new faculty have been productive across the board. Professor Balintfy has broken new ground at the Departmental level in terms of being successful in obtaining contract research funds and has introduced the Department to practices and procedures that may be old hand to some Departments but represent a new area of administration for this Department.

The maturity of the School and some of its programs is evidenced by the background of some of the new faculty who were recruited during the past year. In the area of law, the Department recruited a person who holds both a J.D. degree and a Ph.D. degree in Sociology, both from the University of Wisconsin. He is one of the first students to come out of Wisconsin's new program in law and behavioral science and shows considerable promise as a teacher-scholar in areas of interest in the modern school of administration. To build up our staff to handle the large and expanding enrollment in our urban and regional courses, the Department recruited its first faculty whose Ph.D. is in the area of Public Administration. This new faculty person is completing an interdisciplinary social science program at the Maxwell School, and is specializing in metropolitan studies, sociology, and public administration. He has had extensive

experience with planning commissions in three different states and shows considerable promise as a teacher-scholar and practitioner in the area of urban and regional studies. Another major addittion to the Departmental faculty was in the area of quantitative studies. In this instance, the Department sought a person who had had considerable industrial experience and whose graduate work was current. We were fortunate in recruiting a person with about fifteen years of industrial experience in the area of management science, three years of full-time faculty status at Harvard Graduate School of Business, and recent completion of dissertation under the direction of one of the outstanding scholars in the area of quantitative finance. All of these new faculty are well-trained, student-oriented, and interested in pursuing research.

14. Plans:

Perhaps one of the more significant developments in the near-term future will be the installation of a new Chairman and the possible delegation of greater authority and responsibility to area coordinators. As for curriculum development, the Finance Group plans to explore and possibly introduce a M.S. Program in Finance. The Law and Environmental Group will very likely formalize an undergraduate program to serve the growing student demand for a law and environment program. Obviously the M.S. Program in Management Science and Urban and Regional Administration will be subject to continuous review and possible change. A major new activity for the Department will be hopefully the offering of short courses and seminars, both on and off the campus. Many of the faculty have been active participants in short courses off campus, and it behooves us to find ways to make these short courses a viable on-campus activity.

Publications:

BALINTFY, JOSEPH L.:

"Nonlinear Programming Models for Problems with Joint Chance Constraints," Integer and Nonlinear Programming, edited by J. Abadle, North Holland Publishers, August 1970, pp. 337-352.

"Stochastic Sensitivity Analysis of Linear Programs by Simulation Techniques," Proceedings of the Fourth Conference on Applications of Simulation, December 1970, pp. 130-133.

"The CAMP System for Computerized Menu Plans," Hospitals, Vol. 65, May 1971, pp. 92-93.

"An Experimental Comparison Between Fixed Weight and Linear Programming Food Price Indexes," The Review of Economics and Statistics, August 1970, pp. 324-330. (Co-authored with J. Mefer and W. Wasserman)

"Computer Assisted Menu Planning and Food Service Management," Handbook of Biomedical Systems Information, editor, W. Spector, Encyclopedia Britanica, Chicago, 1971, pp. 1-85.

BELOVICZ, MEYER W.:

"Comments on the 'Risky Shift in Group Betting'", Journal of Experimental Social Psychology, Vol. 7, No. 1, January 1971, pp. 81-83. (Co-authored with Frederick E. Finch)

"A Critical Analysis of the 'Risky Shift' Phenomenon," Organizational Behavior and Human Performance, Vol. 6, No. 2, March 1971, pp. 150-168. (Co-authored with Frederick E. Finch)

BONSIGNORE, JOHN J.:

"Existentialism, The Rule of Law and Article 2 of the Uniform Commercial Code," American Business Law Journal, Fall 1970, pp. 133-156.

CHENG, PAO L.:

"Portfolio Returns and the Random Walk Theory," Journal of Finance, Vol. 24, No. 1, March 1971, pp. 11-30. (Co-authored with M. King Deets)

DEETS, M. KING:

"Variance Preferences and Variance Shifts in Group Investment Decisions," Organizational Behavior and Human Performance, Vol. 5, No. 4, July 1970, pp. 378-386. (Co-authored with George C. Hoyt)

"Portfolio Returns and the Random Walk Theory," Journal of Finance, Vol. 24, No. 1, March 1971, pp. 11-30. (Co-authored with Pao L. Cheng)

HARTZLER, H. RICHARD:

"The Basic Relationship of Legal and Sociological Scholarship," American Business Law Journal, January 1971, pp. 281-285.

KACZKA, EUGENE E.:

"The Employment of a Student Flow Computer Simulation Model in Evaluating the Feasibility of an Educational System," Decision Sciences, Vol. 1, Nos. 3 and 4, July-October 1970, pp. 459-477.

KUMAR, PREM:

"Market Power, Growth, Leverage and the Valuation of the Firm," (abstract of doctoral dissertation) Journal of Finance, March 1971, pp. 188-189.

LUDTKE, JAMES B.:

"Responsive Pricing of Public Utility Services," Assembled papers of the 1970 Seminar on Economics of the Regulated Communications Industry in the Age of Innovation, New England Telephone, 1970, pp. 79-88.

Completed Scholarly Work, Accepted and Scheduled for Publication
(In addition, many of the faculty have working papers in circulation and scholarly writing being considered for publication)

ABRANOVIC, WYNN A.:

"Estimating Demands for Hospital Ancillary Services," AIDS PROCEEDINGS 1971

"A Computer Simulation Approach for Planning Hospital Ancillary Services," Socio-Economic Planning Sciences.

BALINTFY, JOSEPH L.:

A Computerized Management Information and Control System for Shipboard Food Service, (ONR Technical Report, 1)

"Integrated Nutrition and Food Cost Control by Computer," Journal of the American Dietetic Association, p. 1-60 (co-authored with M. J. Gelpi, I. W. Findsoff and L. C. Davis).

BONSIGNORE, JOHN J.:

"Law and Conflict Resolution," American Business Law Journal

"Legal Developments in Marketing," Journal of Marketing

CHENG, PAO L.:

"Statistical Biases and Security Rates of Return," Journal of Financial and Quantitative Analysis, (co-authored with M. King Deets)

DEETS, M. KING:

"Statistical Biases and Security Rates of Return," Journal of Financial and Quantitative Analysis, (co-authored with Pao L. Cheng)

HARTZLER, H. RICHARD:

"The Unheavenly City," Review of book by E. C. Banfield, Growth and Change.

KACZKA, EUGENE E.:

(Readings book with Gordon Chen)

KUMAR, PREM:

"Security Pricing and Investment Criteria in Competitive Markets," American Economic Review (Comments section)

Presentation of Scholarly Papers (not including on-campus seminars in which many of the faculty presented papers)

ABRANOVIC, WYNN A.:

"Estimating Demands for Hospital Ancillary Services," Southeastern Chapter Meeting of the American Institute for Decision Sciences at Virginia Polytechnic Institute, Blacksburg, Virginia, April 30, 1971.

BALINTFY, JOSEPH L.:

"Stochastic Sensitivity Analysis of Linear Programs by Simulation Techniques," Fourth Conference on the Application of Simulation, New York, December 1970.

"Electronic Data Processing for Nutritional Accounting," Workshop of the American Dietetic Association, Chicago, February 1971.

"Mathematical Programming Models and Techniques for Optimum Human Diets," Symposium of Mathematical Programming, The Hague, September 1970.

BONSIGNORE, JOHN J.:

"Youth, Education, Business and Society: A Synthesis," Presented at the dedication of the new College of Business building on the campus of Western Illinois University.

DEETS, M. KING:

"Random Walks and Rebalancing," MIT, Boston, TIMS, Spring 1971.

KACZKA, EUGENE E.:

"Computer Simulation Model of Group Behavior," TIMS, Los Angeles, California.

Off-Campus Public Service:

Perhaps the most unique characteristic of the public service activities of the faculty is that the activities are seldom formally assigned.

1. Hospital Administration

In addition to writing in the field, Wynn Abranovic provided consulting services on computer-based decision making in the area of purchasing. King Deets conducted short-courses on financial administration of hospitals and nursing homes. One of these courses was part of the on-campus continuing educational program and the others were conducted in major metropolitan areas.

2. Social Agencies and Programs in Western Massachusetts

The law faculty have been the most active group within the Department in public services pertaining to social and legal agencies. All of the law faculty have involved some of their students in field work activity in Amherst, Northampton, Holyoke, Chicopee, and Springfield area, and two of the faculty, John Bonsignore and Samuel Goldman, devoted approximately one day a week to the legal services agency of Chicopee.

George Burak and Robert Plattner and a member of the Economics Department encouraged and assisted students in making application for participation in a special summer program sponsored by the NEBHE, with the result that these faculty will be involved in the supervision of four students in summer projects. Two of them will be working in the Model City Program and the other two will be working with the Lower Pioneer Valley Planning Commission.

King Deets provided consulting services to the City of Holyoke.

Other Educational Institutions

Professor Bonsignore submitted a proposal to support the study of the legal system by teacher of social studies. No funding was available.

Federal Agencies

Four faculty from this Department (Gene Kaczka, Bill Belovicz, Marc Choate, and Bob Plattner) participated in the preparation of a multi-million dollar research

proposal submitted to the National Science Foundation. The title of this multidisciplinary project is "A National Network of Pollution-Free Energy Sources" and the principal investigator is Professor Heronemous of the School of Engineering.

Professor Balintfy assembled and trained a research team to work on an ONR-sponsored research grant ($79,000, including some off-campus research) and submitted to HEW a quarter-million dollar research proposal on the diet problem for hospitals.

Professor Balintfy provided consulting services to NASA, Food and Drug Administration of NEW, and the USDA.

Professional Societies

Professor Balintfy serves as secretariat for an International Society known as the Mathematical and Programming Society and as treasurer for SIGNAP. In the spring, he was asked (and accepted) to serve as Program Chairman for the next annual meeting of ORSA.

Professor Bonsignore is a regular contributor to the legal development section in the Journal of Marketing.

Many of the faculty served as referees for articles submitted to scholarly journals. Approximately 15 articles and three books were reviewed for editors by members of the Department, with the major portion of this activity being the work of Gene Kaczka and Joseph Balintfy.

Professor Rivers serves as President of the Springfield Chapter of the Delta Nu Alpha Transportation Fraternity.

Legislative Services

Grant Osborn was the primary mover behind two bills having to do with the pension system for state employees.

Ethan Katsh assisted the University and State Communications Council to organize a branch devoted to facilitating student research on pending legislation, and the Council expects to have ten to twenty U/Mass Amherst students actively involved next fall.

Peter D'Errico served as an active board member to PLEA in the development of new Federal legal services legislation.

Sam Goldman's study of the Massachusetts Small Claims Court is expected to lead to a legislative report.

Services to the U/Mass President's Office

John Bonsignore and Peter d'Errico have been actively involved with President Wood's U/Mass Law School Committee. Activities have included research, drafting of a proposal, and attending meetings in Boston and Washington, D.C.

Services to the Board of Higher Education

Grant Osborn served as Chairman of the Task Force on Faculty Fringe Benefits.

Services to Industry

Grant Osborn has headed up the Business Fellowship Program for the American Risk and Insurance Association, served as Director for the School of Mutual Insurance Agents, and was active in the reevaluation of the CLU educational program.

Services to the Town of Amherst

Robert Rivers participated on the Amherst Traffic Committee, and Robert Plattner is a member of the Town Planning Board.

Appendix C

Department of Management - George Simmons, Chairman

Majors, September 1970.... 165

Students taught, fall terms: 1968 ... 873
1969... 1,064
1970 .. 1,145

Publications and Speeches

Tim Bornstein

Monograph: The Uses, Abuses, and Potential of Fact Finding in Municipal Bargaining Disputes

Speeches: Massachusetts Hospital Personnel Directors Association
Holyoke United Fund Annual Dinner
National Blank Book Company Executive Seminar
Western Massachusetts Employers Association
American Arbitration Association
University of Maine Seminar on Teachers' Disputes
Amherst Human Relations Council

Elliott Carlisle

Speeches: Hartford Metropolitan District Executives
American Institute of Banking
Hartford Combustion Engineering Executives
Veterans Administration Hospital, Northampton

Gordon Chen

Article: "Structural Constraints of Organizational Communication Systems," Journal of Business Administration, Fall, 1970.

Speech: "Systems Approach to Problem Solving," TIMS XVIII Meeting, Washington, D. C., March 24, 1971.

Frederic Finch

Article: "The Risky Shift in Group Betting," Journal of Experimental Social Psychology, January 1971.

M. William Frey

Speech: Social Policy and Action Committee of the Academy of Management

Book: Management Research and Practice (ed.), Eastern Academy of Management

Van Court Hare

Speeches: Association for Computing Machinery
University of Sherbrooke, Canada
Catholic University, Ponce, Puerto Rico
Columbia University Executive Programs
As ACM National lecturer:
Auburn University
Florida Institute of Technology
Baltimore Association for Computing Machinery

Joseph Litterer

Book Translated: Portuguese edition of Analysis of Organizations

Walter O'Donnell

Speeches: "The Mission of International Corporate Management," American Management Association
"Toward Unifying the Management Sciences," The Institute of Management Sciences, Washington, D.C., March 22, 1971.

Max Wortman

Journal Articles: "Manpower: The Management of Human Resources," Academy of Management Journal, 13, No. 2, June, 1970, pp. 198-206.

"Shifts in the Conceptual Approaches Which Underlie Principles of Management," 13, No. 4, Dec. 1970, pp. 439-448.

"Project STEP-UP: A Systems Approach to Upgrading Laid-Off Disadvantaged Workers," (with Robert Bjorklund and David Gray), Proceedings of the Twenty-Third Annual Meeting, Industrial Relations Research Association, Detroit, Dec. 29, 1970 (Madison, Wis.: 1971).

Reviews: "Management of Organizational Behavior: Utilizing Human Resources," by Paul Hersey and Kenneth H. Blanchard, in Personnel Psychology, 23, No.3, Autumn, 1970, pp. 427-428.

Speeches: "Shifts in the Philosophy, Functions and Structure of Metropolitan Employers' Association in the United States, 1890-1964," A paper presented at the Second World Congress, International Industrial Relations Association, Geneva, Switzerland, September 2, 1970, 19pp.

"A Theory of the Development of the Metropolitan Employers' Association Movement in the United States," A paper presented at the Annual Meeting, American Association for the Advancement of Science, Chicago, Dec. 26, 1970. 17 pp.

"A Conceptual Framework for Action," A talk presented at the Mayor's Conference on the Area Economy and Manpower Problems, Springfield, Massachusetts, Oct. 16, 1970.

Max Wortman (continued)

Speeches: "The Inpact of Collective Bargaining upon the Role of the Public Personnel Officer," A talk presented at the Colonial Chapter (Boston), Public Personnel Association, Nov. 18, 1970.

"Employee Relations and Collective Bargaining in the Food Service Industry," A talk presented at the Northeast School Food Service Seminar, Amherst,Mass., July 16, 1970.

"The Personnel Research Challenge in the 1970's," A talk presented at the Hartford Chapter, Public Personnel Association, Sept. 23, 1970.

"Labor Relations in the Federal Civil Service," Executive Seminar Center, U.S. Civil Service Commission, Kings Point, Long Island, N.Y., June 17, 1970 and August 10, 1970.

"Personnel Management in the Future," Executive Seminar Center, U.S.Civil Service Commission, Kings Point, Long Island, N.Y., June 17, 1970.

"Conflict Resolution in the Federal Service," Executive Seminar Center, U.S. Civil Service Commision, Kings Point,Long Island,NY,Aug. 10,1970.

"Management of Human Assets," American Institute of Banking, Nov. 4, 1970, Hartford, Conn.

"Problem Solving in Organizations," and "Policy Formation," Municipal Building Officials Conference, Oct. 5-9, 1970, Amherst.

"Management-by-Objectives," Northampton Veterans Administration Hospital, March 8 and 22, 1971.

"Managerial Theories, Policies, and Practices," A series of talks for the Veterans' Administration, Northampton, Mass. Hospital, Oct. 7, 1970; Nov. 4, 1970; March 29, 1971; and April 5, 1971.

"Manpower Planning," A Conference for the Pittsfield, Greater Springfield, and Worcester CAMPS Committees, Amherst, Feb. 17, 1971.

"Occupational Education and Manpower Planning," A talk at the Conference for Occupational Education and Manpower Administrators, Amherst, April 8, 1971.

Article: "The Management System and the Meaning of Organization," reprinted in Organization Theories, William Senton, editor, Columbus, Ohio: Charles Merrill.

Curriculum

One of the most significant accomplishments of the year was the progress achieved toward a thoroughgoing revision of the departmental curriculum, in particular, the introductory course, which is the principal contact between the department and students other than management majors, including many outside the School of Business Administration.

Introductory courses in management and other areas are frequently oriented so as to aid the student in subsequent courses in the field. Both the content and approach are selected so that subsequent courses in the curriculum can build upon what is taught in the introductory course.

An alternate orientation is to look at the topic with which the curriculum is concerned, to provide the frameworks into which it can be placed and to introduce the types of problems people in the field have related to this topic. The objective is to introduce the field and set a background rather than to "prepare" the student for subsequent courses. In fact, a student already interested and committed to the area could conceivably take an advanced course in the area without having taken the introductory course. The disadvantage in this second orientation is, of course, that some general substantive topics which the student needs in more advanced courses cannot be handled in the first course and will have to be handled in the higher level courses. The advantages, however, are two: first, the course can be presented in a way that will be most useful to non-majors in the area, thereby opening it to students from the entire university; secondly, the course permits a greater variety of treatments so that approaches more interesting to the non-specialists can be adopted.

The new introductory course is intended to accomplish the following things:

1. Introduce students to the main content areas in the field of management.

   a. The introduction is to take the form of establishing frameworks and explaining overall content and issues. It is not intended to convey technical knowledge or develop individual skills.

2. Present this material in a context and with methods which will bring out the importance of the area to the student both as an individual and as a member of society.

   Throughout, the basic intent will be to explore the role of administration or management in today's complex, rapidly changing society.

   The basic integrating feature in the course will be a set of issues considered with each topic or context. The following issues are proposed.

a. The Individual in an Organized Setting. The concern here is that man is at one and the same time dependent upon and frustrated by organizations. In examining this issue efforts shall be made to understand the nature of this dilemma and the possibilities for reducing its consequences.

b. Man and the Machine. The world today is not only organized but also dominated by machines. This innovation is, however, of relatively recent origin. Most of our culture and many of our societal forms were developed or have strong roots in the earlier nonindustrial or non-machine heritage of man. This has left us underdeveloped in ways either to deal with or understand fully the impact of machines on man in work situations. The issue here is the dilemma when the conflicting but interdependent needs of man and machine converge.

c. The Organization in Society. Our social world is populated with organizations of every conceivable size. Their growth overtime has drastically altered the capabilities of citizens taking collective action through historical governmental and social processes.

d. Administrative Problems of Society. Many of today's issues wuch as pollution, the malfunctioning of welfare systems, the dysfunctional consequences of large city educational systems and alike are not the result of inadequate technology, financial resources or even effort. It has been demonstrated many times that we do have the technical knowledge to solve the technical aspects of these problems, that large sums of money appropriated never get brought to bear on the actual issues and that people of good will and high motive often work ineffectively because they cannot directly cope with the problems they desperately want to solve. To put it simply the heart of the problem is often managerial in nature. Somehow we fail to bring our technical, financial, and human resources effectively to bear on the problems. This issue is concerned with this point.

e. Business Location and the Environment. Many social issues are concerned one way or another with the location of plants and office work areas; building a plant in a town creates jobs, closing one eliminates them. It is considered desirable to locate plants in ghetto areas but when this is done it is often found much more difficult to attract the necessary highly skilled, technical and managerial personnel to the plant who do not live in the ghetto areas. Concentration of one type of industry in an area both overtaxes the labor supply in boom periods and submerges it in mass unemployment in declining periods. These are but a few of the facts involved with this issue.

f. Profit and Social Welfare. Closely in line with the above issue is the dilemma faced by an organization when it attempts to accomplish things outdide of this traditionally specialized role. For the business firm this involves the questions of engaging in social welfare activities which deflect funds into non-profit producing expenditures. The same occurs when a university considers moving from the traditional educational-scientific role into one of social change-agent in the community. In studying this issue both sides would be explored.

g. Business and Public Policy. Sometimes organizations, business firms in particular, undertake action which becomes intimately involved with the execution of public policy. Business firms taking on educational contracts in a number of cities such as Gary, Indiana, become involved with an intimate public concern; namely, educating our children. Other firms dealing with foreign governments such as oil companies with the countries of Venezuela, Iran, etc. make arrangements which have deep and complex effects on our national foreign policy.

In order not to be repetitive, it has not been mentioned with each of the above issues that actions are taken on them by managerial groups or decisions are made, or, perhaps, occasionally fail to be made, by using managerial processes. The central question shall be what is the role or what could be the role of management in regard to these issues.

Appendix D

Department of Marketing - Jack S. Wolf, Head

Departmental Statistics

4. (a) Number of Majors: September, 1967 -- 129
September, 1968 -- 150
September, 1969 -- 181
September, 1970 -- 209

(b) Number of Students Taught: (majors and others)

September, 1967 -- 559
September, 1968 -- 581
September, 1969 -- 769
September, 1970 -- 1,027

5. Professional Activities of the Faculty:

Victor P. Buell:

Released November 1970. Edited volume entitled Handbook of Modern Marketing, McGraw-Hill Book Company, 1970.

First chapter in Readings in Marketing Research, Robert Ferber, Editor, published in Spanish by Herrero Hermanos, Sucesores, S.A., Mexico, D.F., 1970. Chapter title: "How Can We Fit Marketing Research Into the Structure of the Business Organization to Obtain the Maximum Effectiveness?" (This book was sponsored by AMA and the U.S. Government to promote economic development in South America.)

Coordinating and Controlling the Advertising Function in a Multi-Company, Multi-Division Corporation, a 22 page report published by the Association of National Advertisers, New York, January 1971, under my name as author.

Marketing Management in Action, McGraw-Hill, 1966-- Published this year in Italian and Japanese, hard cover editions and in England in paper back edition.

Interviewed: (a) Executive development directors at Penn State, New England Center for Continuing Education, University of North Carolina, and the former director of the University of Pittsburgh.

(b) Companies and association executives in Springfield, Boston, and South Deerfield to develop interest in supporting U Mass executive development as well as sources for class speakers and class field trips.

Attended: (a) Association for Consumer Research meetings, U Mass.

(b) National educator's meetings, AMA, Boston, August, September 1970.

(c) Three meetings of National Marketing Advisory Committee Executive Committee and annual meeting of the whole committee.

Chairman, Nominating Committee, AMA; member Sponsored Funds Board.

Speaker: (a) Luncheon meetings of U Mass Chapter and Boston Chapter of AMA.

(b) Association of National Advertiser's Advertising Management Workshop, New York, 11/18/70

(c) Industrial Marketing Magazine, Industrial Marketing Workshop, Chicago, 11/30/70

(d) Association of National Advertisers Workshop on "Determination, Allocation, and Control of Marketing Expenditures," N.Y., June 16, 1971.

Presented testimony to Federal Trade Commission hearings on proposed "cooling off" regulation.

Taught in in-company executive pricing seminar, M & T Chemicals Co., Rahway, New Jersey, 3/23/71

Planned and promoted Senior Executive Development Seminar in cooperation with N.E. Gas Association and area chambers of commerce, which had to be cancelled due to insufficient registration.

Planning: (a) With Western Mass. Chapter for marketing seminar to be held U Mass, Spring 1972.

(b) With Professor Rivers and Transportation Club of Springfield for transportation seminar to be scheduled at U Mass, 1972.

(c) With CBER and Chamber of Commerce of Northampton on efforts to bring conference of N.E. Chamber executives to U Mass campus as well as annual Chamber executives' educational Institute which would utilize SBA faculty.

Coordinator of two day management training program for nursing home administrators in cooperation with Center for Continuing Education and SBA faculty, May 21, 22, 1971.

Appointed to Editorial Board, Journal of Merkating and reviewed manuscripts regularly.

Continued as editorial advisor to Industrial Marketing magazine.

Reviewed papers for Competitive Papers Committee, Eastern Academy of Management.

Donald G. Frederick:

Paper presented at AMA meetings in Boston, September 1, 1970. "A Pricing Decision Using the Bayesian Multinormal Distribution".

Paper presented at TIMS meetings in Los Angeles, October 17, 1970.

Chairman of College of Marketing session TIMS International Meetings, Washington, D.C., March 1971.

Nominated to Secretary-Treasurer of TIMS College of Marketing.

Article appearing in May, 1971 issue of JMR.

Abstract appearing in June 1 issue of Journal of Economic Literature, American Economic Association.

Joseph P. Guiltinan:

American Marketing Association Workshop on Contractual Marketing Systems (Served as critic for a paper on "Optimal Franchising") August 1970 at Long Island University.

International meeting of the Institute of Management Sciences April 1971 at Washington, D.C. Presented a paper entitled "Numerical Taxonomy and Market Segmentation: Retrospect and Prospects".

Attended American Marketing Association Fall Educators Conference, September, 1970, Boston.

Article submitted to Journal of Marketing Research, "The Implementation Problem in Market Segmentation: Reasons and Implications."

Faculty Research Grant for Summer 1971 Research on "Evaluating and Implementing Market Segmentation Strategies".

Graduate Council Research Grant of $1,492 for Research (with James Wiek) on "Improving Marketing Channel Performance Through Behavioral Analysis."

Kent B. Monroe:

Presented a paper on "The Measurement of Price Thresholds: Psychophysics and Latitudes of Acceptance," at Fall Educator's Conference, AMA, Boston, Massachusetts, September 2, 1970.

Presented a paper on "The Influence of Price and the Cognitive Dimension on Brand Attitudes and Brand Preferences," at Attitude Research and Consumer Behavior Workshop, University of Illinois, December 4, 1970.

Presented a paper on "New Dimensions on Price: The Price Research Program at the University of Massachusetts," to the Marketing Research Division, E.I. duPont de Nemours Co., Wilmington, Del., March 23, 1971.

Presented a paper "Buyers' Subjective Perceptions of Price," at Graduate Marketing Seminar, Renssalear Polytechnic Institute, May 11, 1971.

"The Information Content of Prices: A Preliminary Model for Estimating Buyer Response," Management Science, April, 1971, pp. B519-32.

"Psychophysics of Prices: A Reappraisal" Journal of Marketing Research, May 1971.

Conferences Attended:

(a) Association for Consumer Research, August 28-30, 1970

(b) American Marketing Association, August 31-Sept. 7, 1970

(c) Workshop on Attitude Research and Consumer Behavior December 3-5, 1970.

(d) The Institute of Management Sciences, Marketing College, March 22, 1971.

Gordon Paul:

Publications:

(a) "An Index for the Measurement of Consumer Loyalty" Decision Sciences, Vol. II (January 1971) pp. 17-24, (with Roger L. Berford and Ben M. Enis).

(b) "Store Loyalty" as a Basis for Market Segmentation", Journal of Retailing, Vol. 46, No. 3, (Fall 1970) pp. 42-56. (With Ben M. Enis)

(c) Book review - "Dimensions of Consumer Behavior" Journal of Marketing, Vol. 35, No. 1 (January 1971) pp. 104-5.

Paper presented, Southern Marketing Association, "Geographic Mobiles, Some Divergent Findings," (with George Sharpe) November 1970.

George Schwartz:

Awarded $1,000 grant by University Research Council, Spring Semester, 1971.

Awarded $750 grant by SBA Research Committee, Summer 1971.

Submitted two papers for possible presentation at the 1971 AMA Fall Educators Conference, Minneapolis, Minnesota.

Book review scheduled for publication in July issue of the Journal of Marketing.

Guest lecturer, Consumer Survival Course, Orchard Hill Complex.

Experimented with consumer behavior course by including consumerist issues along with the usual behavioral material.

Contributed to the public dialogue on business and society with a letter published in THE NEW YORK TIMES, July 19, 1970: "Acts, Not Rhetoric, Can Aid Business".

M. Venkatesan:

Published:

(a) Consumer Behavior: Contemporary Research in Action, (edited with Holloway and Mittelstaedt) Houghton-Mifflin.

(b) Scientific Marketing Research (edited with G. Albaum) Free Press.

(c) Introduction to Marketing Experimentation (with Holloway) Free Press.

(d) "Psychology in Consumer Marketing," Chapter in Handbook of Modern Marketing, Editor, V. Buell, McGraw-Hill.

Arrangements Chairman for the First Annual Meeting of the Association for Consumer Research, Amherst, Massachusetts, August 28-29, 1970.

Member, Advisory Council, Association of Consumer Research.

Chaired a session on "Cognitive Processes Underlying Consumer Judgments", at the Boston Meeting of the American Marketing Association (Educators' Conference), August 30-September 2, 1970.

Member, University Senate's Scholarship Committee.

Member, Library Resources and Research Services Committee of SBA

Consultant to National Progress and Economic Development, Philadelphia, Pennsylvania.

Chairman, Ad hoc Faculty Welfare Committee, U Mass AAUP Chapter.
Member, Human Subject Review Committee (of the Graduate School).

James L. Wiek:

Participated in research and preparation of a report titled: "New Possibilities for Business and Economic Development in Greater Springfield, Massachusetts". Directed and published by the Center for Business and Economic Research, University of Massachusetts, September, 1970, 30 pages.

Attended and participated in discussions at the American Marketing Association's "Contractual Marketing Systems Workshop" at Long Island University, August 26-27, 1970.

Reviewed manuscript of "An Overview of the Basic Elements and Models of Interpersonal Communication" submitted to the Journal of Marketing for publication.

Participated as co-speaker in a state wide Extension Home Economists Conference on the theme "Communications", January 8, 1971.

Awarded SBA Funded Research Grant; Summer 1970. Title of project: "Discrepant Perceptions in Vertical Marketing Systems" Grant administered by Center for Business and Economic Research, School of Business Administration.

Awarded University of Massachusetts Faculty Research Council Grant. A project submitted jointly with Professor Joseph Guiltinan. Title: "Improving Marketing Channel Performance Through Behavioral Analysis." (January 1, 1971 to February, 1972).

Jack S. Wolf:

Speaker: (a) State-wide Extension Home Economists Conference, Worcester, Massachusetts, January 1971.

(b) Forest Products Research Society, Leominister, Mass., January 1971.

(c) Greater Springfield Chamber of Commerce Conference on Regional and Community Development, Springfield, Mass., March 1971.

(d) Wine and Spirits Wholesalers of America National Conference, Honolulu, Hawaii, May, 1971.

(e) National Beer Wholesalers of America, Montreal, Canada June 1971.

(f) Commercial Refrigeration Manufacturers Association, Chicago, Illinois, June 1971.

(g) Young Presidents Organization, Hartford, Connecticut, June, 1971.

Original Chapter (with Wendell Smith) "Market Needs and Market Challenges" in Handbook of Modern Marketing, Edited by V. Buell, McGraw-Hill Book Company, November, 1970.

Participant, Management Training Seminar, Rigi, Switzerland, Sept. 1970.

Member: (a) Development and Industrial Commission, Town of Amherst

(b) Traffic Circulation Committee, Town of Amherst

(c) Center School Complex Committee, Town of Amherst

(d) Citizens Advisory Committee, Town of Amherst

Parker M. Worthing:

Publications:

(a) "The Assessment of Product Deletion Decision Indicators" will appear in Fortran Applications in Business Administration, ed., Thomas J. Schriber, Volume II, June 1971, The Graduate School of Business Administration, The University of Michigan.

(b) "American Consumers' Perceptions of Foreign Made Products," with M. Venkatesan, will appear in the Fall issue of Markeds Kommunikasjon, published by the Instituttet for Markedsforing, Oslo, Norway.

Invited lecturer, "New Dimensions in Sales Management" Seminar, Centre for Continuing Studies in Marketing, University of Waterloo, Ontario, Dec. 9-11, 1970.

Faculty member participant, General Foods Campus Visitation Task Force, May 5, 1971.

All members of my BA 722 section took part in outside projects for two Springfield firms during the Spring 1971 semester. Final reports presented by the three groups were well received by the firms management personnel.

Member, SBA Personnel & Policy Review Committee

Mary K. Barber:

Professor Barber has been given primary responsibility for developing a new thrust pertaining to the marketing environment in the required course Marketing 201, Fundamentals of Marketing. She has compiled a report that suggests a number of important conclusions pertaining to student reaction and acceptance of this core course. Rather than detail the conclusions in the Annual Report, we will attach her prepared statement as an addendum for your information and abstracting. This addendum will be forwarded to your office under separate cover by June 7, 1971.

In addition to the analysis of the Marketing core course, Professor Barber as Chairman of the Undergraduate Curriculum Committee has made a considerable service input to the School.

Bertil Liander:

Director of the Junior Executive Training Program, University of Massachusetts (June 21-July 31, 56 participants from 9 countries), (1970).

Negotiations for a management program for Swiss students to be held at U Mass Summer 1971 (July 26-August 20).

Organized and taught in U Mass European Management Seminar, Rigi, Kaltbad, Switzerland.

Grant from U. S. Department of Commerce to conduct University/Business Export expansion Program. Program was run with graduate students working for Massachusetts manufacturers, Spring semester 1971.

Director of the Junior Executive Training Program, University of Massachusetts (45 participants from 9 countries; June 5-July 17, 1971).

6. Departmental Accomplishments:

The experimentation to date regarding the first course in marketing, Fundamentals of Marketing, continues to go well. Although somewhat dependent upon the instructor, the intent of this course is to provide considerable material pertaining to social responsibility, ethical considerations, and the quality of marketing performance generally as well as some introduction to the environmental constraints that operate on marketing decision makers. The follow-up course, Marketing 216, Marketing Management, is now considered the second level course.

The Department is continuing to utilize most, if not all, departmental faculty in one way or another in the first course. The student reaction to the lecture-seminar approach has been favorable. In addition most faculty continue to be enthusiastic about their participation in the first course. It should also be noted that the Fundamentals of Marketing course is attracting considerable numbers of students across the campus. We have noted additional enrollments in such areas as Hotel, Restaurant and Travel Administration, Home Economics, and the College of Arts and Sciences.

A considerable number of the marketing faculty this past year has increased their national recognition by appearing on national programs. The two professional meetings that our faculty have participated in this past year include the Institute of Management Sciences and the American Marketing Association. Individual accomplishments along these lines will be detailed below. It is also interesting to note that for the national AMA meetings to be held in Minneapolis next August, seven single or collaborative competitive abstracts were submitted by the Marketing faculty.

The Department, and individual members thereof, invited a considerable number of off-campus speakers into their classrooms to provide current company experiences relevant to the course being offered. A number of these visits were also arranged so that the faculty might arrange informal discussion after a classroom appearance. The Department wishes to increase the number of these visits in order to make a greater number of contacts with individual businesses and to provide students an opportunity to learn of unique situations or problems being faced by executives in those businesses. Along these same lines, Professor Paul and Worthing have made contacts with specific businesses and have put a number of graduate students to work on class projects in order to give first-hand exposure to a company's problem situation. Three firms in the immediate area have been so utilized. I refer to Friendly's Ice Cream Company, Framingham, and Vinyl Maid Inc., and Audio and Electronics, Inc., of Springfield.

The Department formally entered Ford Motor Company's Pinto Project Competition in the Fall semester of 1970. Professors Frederick, Monroe and Worthing representing courses in Marketing Research, Marketing Models, and Product Planning and Development, along with 23 Marketing majors worked in a collaboratvie fashion to finalize a Pinto Report which was submitted prior to the deadline date in February 1971. The results of this competition in the Northeast region have not yet been announced.

CENTER FOR BUSINESS AND ECONOMIC RESEARCH

Report of the Director, 1970-71

Dr. Robert E. McGarrah

When I assumed responsibilities as Director in September, 1968 there were practically no terms of reference concerning goals, strategies, policies, or procedures for the Director to pursue. I therefore, initiated a focus of concentration on institutional (industry-business-government) programs concerned with improving urban and environmental qualities. At the same time I endeavored to expand and strengthen the Center's support services for individual faculty members engaged in research or continuing education projects.

There have been and continue to be serious constraints to the role of the Director, Center for Business and Economic Research.

First, there have been a lack of funds and lack of support from the administration. Each year we have requested separate appropriations of funds and additional staff needed to launch projects and programs of the Center. I have also requested reallocations of existing funds to defray needs of the Center for additional staff, travel expenses, and other support services. These requests are yet to be fulfilled.

Since 1968 there has been a significant reduction in levels of fundings provided under terms of grants to universities by foundations and federal agencies. Business schools have never enjoyed the relative amounts of support from National Science Foundation, Ford Foundation, Rockefeller, and others that have been enjoyed (but to a diminishing extent since 1968) by departments of physics, chemistry, life sciences or public health, medicine or education divisions of the university. I have tried to secure grants from the Ford Foundation, the Alfred P. Sloan Foundation, the General Electric Foundation, the Institute of Life Insurance, Massachusetts Mutual Life Insurance Company, American Telephone and Telegraph Company. My requests have been for "general purpose, seed money" grants to help our Center launch a variety of self-generating, revenue-producing activities, and for special purpose grants related to specific problems such as "consumerism" or "minority manpower" problems.

I have also exerted intensive and extensive efforts to raise funds by way of contract research agreements with business, industry or government agencies. Here we have had some modest success. Dollar wise it has amounted to a little over $20,000.

Projects for the Greater Springfield Chamber of Commerce	
Executive Seminar in Springfield, June 1970	($1320)
Study and report of Possibilities for Industrial and Economic Development in Greater Springfield, September 1970	($2000)
Technical and management advisory services for model neighborhood businessmen, Feb.-June 1971	($1250)

Lower Pioneer Valley Regional Planning Commission
Study of Sources and Uses of Public Funds
Problems and Potential for Economic Development
Economic Base for Thirteen Outlying Towns in the Region ($13,600)

In addition I have served as principle investigator guiding efforts of three graduate students in a study of the plans, organization and management of the Nashua River Water Quality Improvement Program. ($4500)

Contract research services offer significant benefits. They are a means for generating funds and opportunities for faculty and students to work on mission and problem-oriented research. They can provide "experiential-internship-education" for students and faculty working on real problems.

However, the University of Massachusetts and other universities have a long way to go before their roles are clearly established in the growing, competitive markets for contract research or higher educational services. Commercial consulting organizations (e.g. A.D. Little, McKinsey, Harbridge House), and not-for-profit organizations such as, Rand, Mellon Institute, Stanford Research Institute are all vying for customers in markets for what Peter Drucker has called the "new knowledge industry". Our Center needs to exert much more than a one man effort if, indeed, we are effectively to claim an adequate share of this growing market. We must impress prospective clients with our abilities to deliver information in practical, utilitarian terms for the client and his purposes. Typically, the image of university work on contract-research projects is that of abstract, academic, theoretical treatises more suitable for scholarly journals.

Other problems relate to U-Mass policies restricting access to and uses of information in work pertaining to military, political or proprietary purposes of prospective clients. Understandably, the university desires to uphold principles of academic freedom, and the free access to and uses of information that necessarily are in accordance therewith. Of course, there are ways to uphold the university's policies and preserve the rights of clients. All professional-client relations must resolve this dilemma. But it continues to be an uphill fight to try to convince university authorities and clients that our U-Mass faculty can angage professionally as educators acting in the name of the University while, at the same time, minimizing conflicts of political, military or proprietary interests. These days the university is vulnerable to charges of "complicity".

There are unrealistic limits imposed on the amount of compensation for faculty and students who obtain or perform research contract services in the name of our Center for Business and Economic Research, (in lieu of practicing on their own as "independent" consultants). Here again, I have faced a serious dilemma. On the one hand I have not been able to offer guarantees of monetary inducement for faculty to help in obtaining contract funds for research

or other higher educational services performed in the name of our Center. On the other hand University authorities have indicated that I can not make a case effectively for relaxing the unrealistic salary restrictions until after I have a firm contract in hand. As Director, my job is one of promoting research and higher educational services done in the name of the School of Business Administration and the University of Massachusetts. It is not my primary responsibility to generate "outside" consulting opportunities for faculty.

Still another serious constraint relates to the scheme for evaluation of performance of faculty and staff. It has been clear that rewards (merited raises, promotions, tenures, etc.) for performance on problem oriented contract-research-service projects are much too small. Compared to the rewards and recognition for discipline-oriented ("pure") research leading to publication in "scholarly" journals, work done by faculty under the aegis of our Center has been relegated a much lower priority of importance and recognition. It has been a long and difficult effort to persuade faculty and administration that rewards for mission-problem-oriented, research and higher educational services by groups of faculty and students working to help management and staff of other institutions can and should be just as significant as the rewards from individual, discipline-oriented research.

As Director, my job has been to support research by faculty and to promote opportunities and funds for research in higher educational services which would bring distinction to the School of Business Administration and to the U-Mass, Amherst. But as Dean Smith, Dean Picha and others have observed, faculty loyalties and attitudes are much stronger and more positively directed toward efforts within their own profession and academic discipline than toward efforts which bring distinction to the institution.

I nevertheless am convinced that these problems are not insurmountable and that our Center should continue to strive toward institutional goals while at the same time supporting efforts to bring professional distinction to individual faculty and students. I still believe it to be a worthwhile mission to try to promote the Center. After three years and much frustration this conclusion is not lightly stated.

Regrettably, beyond these problems and constraints there have been personal indignities. Personal evaluation seems to have become almost an obsession. Every issue seems immediately to relate to personnel evaluation. Missions and programs for research, teaching and services are discussed far more extensively in terms of who than in terms of what, how, when, where, and why some programs for research and teaching or service are preferable to others. We seem to have over emphasized the politics of problems of defining and executing the role and mission of the School. This over emphasis has almost inevitably led to a situation of low morale, acrimonious

attitudes and propensities for personalized attacks on individuals.

And yet from my conversations and remarks at various meetings I remain convinced that as a faculty we would much prefer to exchange ideas and to cooperate in projects and programs than to work independently, each trying to feather his own nest with little or no regard to the School and its programs of research, teaching and service.

Since early 1971, an especially elected Faculty committee has worked intensively to review objectives, policies and practices of the Center. I am glad that this Review Committee has pointed out constraints of the Center and its needs for more supportive efforts in order to grow and serve. I remain convinced that we can revive a mutual respect and restore morale by working together with students to help "clients" solve their problems of managing business and government and other institutions whose efforts are inevitably required to improve urban and environmental qualities of life.

Accomplishments

At the request of the faculty we prepared a "CEBER White Paper" summarizing the objectives and efforts towards their achievements. This report was prepared and distributed in January 1971. A copy is attached with this report.

During the Spring semester 1971 a variety of field service projects were completed for business and government organizations responding to the CEBER Brochure mailed during the winter 1970.

Under the direction of Associate Professor Donald Stone and Associate Professor Arthur Elkins 7 students in BA 799 and SBA 705 performed a study and reported recommendations to the Town of Hardwick, Massachusetts.

Under the direction of Associate Professor Parker Worthing 23 students conducted project studies concerned with marketability, new product planning and market development for two different firms in Springfield and West Springfield.

Under the direction of Associate Professor Arthur Elkins 10 MBA students of our ABLE Program and 4 or 5 other MBA students provided business advisory services for Model Neighborhood Area businessmen in Springfield. These services consisted of advice in applying for and investing funds obtained from small business loans; the development and operation of bookkeeping, merchandising and contract bidding policies and procedures for clients. Professor Elkins also organized and conducted seminars for Amherst residents on vital subjects of laws of discrimination in housing, employment, etc.

Report of the Director

Professor Elkins deserves commendation for his work as Acting Associate Director of the Center during the period December 1970 - May 1971. I regret that suitable compensation arrangements were not provided so that he could continue as Associate Director.

It seems clear that faculty-student groups engaged in field project research and advisory services can define a new and exciting mode for higher education via experiences in the field. Such mission-problem oriented projects undertaken by groups of faculty and students can provide means for generating funds. These funds can serve not only to defray expenses and to compensate for services rendered but also to support on-campus research on pre- or post-doctoral projects more or less directly related to the field work. Equally important is the fact that such projects require interdisciplinary cooperation among the faculty-student teams so engaged. These interdisciplinary experiences working to service "clients in the field" are almost bound to result in salutary benefits of increased cooperation and mutual respect among faculty and students engaged on campus in teaching and research. Finally, the field research services can help to restore the sense of professional ethic and faith in the role of the university, and in contributions of faculty and students toward knowledge and its uses by business, industry and government for the benefit of society as a whole.

CENTER FOR BUSINESS AND ECONOMIC RESEARCH (CEBER)

OBJECTIVES

- To encourage and support original and applied research by faculty and students in all areas of administration.
- To initiate and sponsor non-credit, management development and extension education programs in business, administration, and related areas.
- To initiate and promote applied research and technical assistance projects.
- To provide extension and field services to administrators of public and private institutions within the Commonwealth in applying concepts of organizational behavior, quantitative techniques, economics, law, management, marketing, accounting and finance.
- To provide financial, technical, clerical, and promotional support for on-going teaching and research programs within the school.
- To provide mechanisms through which faculty and qualified students can engage in interdisciplinary projects and programs for improving higher education.

EFFORTS TOWARD ACHIEVEMENT OF OBJECTIVES

Past, Current, Pending

I. Conferences, Seminars, Colloquia

Business Employment Skills Training (BEST) Program. A forty-week, two hundred class hour course in fundamentals of business administration for under-employed minority group members of Greater Springfield conducted by 15 faculty and graduate students during the period May 1969 through January 1970.

Graduate-Faculty Seminars on Urban and Environmental Improvements. A series of weekly seminars held during the academic years 1968-69 and 1969-70 devoted to problems of the public and private organization concerned with improvements in housing, transportation, employment, land use, environmental qualities, relations with minority groups or consumers, health delivery systems. Speakers included faculty and graduate students from academic institutions, and administrators of government and business organizations. Participating were faculty and students from the Five Colleges.

Joint Seminar, Holyoke Chamber of Commerce, held May, 1970 on the theme "Saving in a Tight Economic Situation." Sessions were conducted by six faculty members and Dean Smith.

Greater Springfield Chamber of Commerce Executive Development Seminar, held June 11, 1970 on the theme of "Lower Costs, Greater Effectiveness in Facing Growing Market Uncertainties." Sessions were conducted by seven SBA faculty members.

Black Management Symposium, held March, 1970, on problems of recruiting, selection, promoting and placement of minority group executives. In addition to well-known outside speakers, about ten faculty and graduate students served as members of discussion panels or chairmen of discussion sessions.

Senior Executive Development Program, to be held March 17, 1971 through May 14, 1971. Fourteen faculty are involved in planning and conducting this series of five, two full day (morning and evening) sessions scheduled over a ten week period. Sessions are to be devoted to problems of executive policy and general management.

Course in Anti-Discrimination Laws Affecting Housing, Employment, Public Accomodations, sponsored cooperatively with a variety of Amherst community groups. This non-credit course would be taught by SBA law faculty and others and is being planned for execution during the Spring of 1971.

Program for Administrators of Public School Systems. Two SBA faculty members are developing materials and syllabi for a short course to deal with such problems as financing and acquisition, planning and programming for new facilities; management of food services; procurement, routing, scheduling of school bus fleets; information systems for planning, programming, budgeting of maintenance services and supplies.

Small Business Managers Program. Possibly in cooperation with the Small Business Administration or the Small Business Association of New England (SBANE), these programs are being planned to focus on concepts, techniques and problems of small business firms.

Faculty Colloquia on Business & Economic Research. These colloquia (usually one-day) would be planned and conducted by faculty to foster collaboration and exchange of research interests with colleagues from other institutions located within a 100 mile radius. The Center would fund expenses for promotion, meals and conference materials. A memo outlining further details will be sent in the near future.

Conference on "A Strategy for Environmental Improvement." In cooperation with the Technical Guidance Center for Industrial Western Pollution Control of U-Mass, CEBER is planning a conference for executives and administrators of industry, government, and conservation groups concerned with technical, financial, and managerial aspects of water quality improvement projects.

II. Applied Research and Management Consultation Services

Studies for the Lower Pioneer Valley Regional Planning Commission. These studies consisted of: (1) Sources and Uses of Public Funds in forty-three towns and cities; (2) Study of the Economic Base in Thirteen Outlying Communities of the planning district; (3) Problems and Potentials for Economic Growth and development in the planning district. Three students and four faculty members conducted these studies during the period June-November, 1969.

Opportunities for Business and Economic Development in the Greater Springfield Area. During the period June-September, 1970, three SBA and two department of Economics faculty developed recommendations for the kinds of industrial and economic activities most likely to be attracted and to contribute effectively to growth in income and employment in the Greater Springfield Area. These recommendations are the basis for the promotional campaign by the Chamber of Commerce and Municipal Government to attract new investments in the Greater Springfield Area.

Economic Development Assistance for the Greater Springfield Area. CEBER has submitted a proposal requesting the Economic Development Administration, Washington, to grant $104,000.00 for fiscal years 1972-73 as seed money to finance technical, educational and managerial services for minority economic development in Springfield; and internships for qualified students desiring employment in minority group economic development.

Business Assistance Office, Model Cities Agency, and Greater Springfield Chamber of Commerce. During Spring, 1971. seven graduate students and several faculty members will provide advisory services in bookkeeping, accounting, merchandising, personnel, basic finance, etc. for owners and managers of business firms located in the Model Neighborhood area of Springfield. In addition, it is probable that the Center will be asked to assist in staffing and operating a MESBIC (Minority Enterprise Small Business Investment Corporation) for which some $220,000 of a goal of $250,000 have been pledged by Springfield area business firms.

Consumer Counselling for Minority Groups. Plans have been submitted for organizing more effective consumer counselling services for minority groups in the Greater Springfield Area. Such services are to include optimal economic and nutritional values for food purchasing, installment loan credits, household

budgeting, etc. The aim would be to improve links between minority groups and existing agencies, such as the Better Business Bureau, Ag-Economic Extension Services, Public Adult Education Programs, etc. concerned with consumer economics.

University Evaluation of the Water Quality Demonstration Program for the Nashua River Basin. CEBER has submitted a proposal for an estimated $270,000.00 collaborative project with the University of New Hampshire over the next five years to study and evaluate the plans, organization, activities and events of the fifty million dollar Nashua River Water Quality Demonstration Program. The aim is to produce a series of documents describing and evaluating this program for the benefit of communities in other river basins in the U.S. who may wish to examine experiences in the Nashua River Program. Approximately fifteen faculty from various disciplines of business, economics, government, sociology, environmental engineering, environmental sciences, etc. have agreed to serve as a nucleus interdisciplinary group; collaboration has begun with corresponding faculty of the University of New Hampshire.

Development of a Plan and Organization for the Collaborative U-Mass-University of New Hampshire Study of the Nashua River Water Quality Demonstration Program. During the Spring, 1971 two faculty and three graduate students will conduct reconnaissance studies of plans and progress in the Nashua River Program and will develop a plan and organization for the larger collaborative university study described above. This preparatory reconnaissance study will be funded by an allotment grant involving two research fellowships plus reimbursements for expenses of the project team in travelling to and from the Nashua River region.

Organization, Administration and Performance Evaluation of a R & D Project Group. Two faculty and one or two graduate students have proposed to study and evaulate the organization of an interdisciplinary project team formed from different departments of a large manufacturing company in Massachusetts. This would be a four-month project dealing with issues of reconciling conflicts between organizations structured around functionalized departments with those interdisciplinary or cross-functional groups structured around missions and problems of the institution.

Project for the Pioneer Valley Association, Incorporated. Two faculty have prepared and submitted a proposal to conduct a feasibility study for package resource development for Franklin and Hamoden counties; also for "up-dating a promotional monograph" for the Pioneer Valley Association. The first project would be concerned with the feasibility of self-contained recreation and tourist complexes containing facilities for indoor and outdoor recreation and entertainment, as well as hotel and restaurant accomodations. The other project would consist of a revision of "Industrial Assets of the Pioneer Valley in Western Massachusetts," a publication promoting the sociological, educational, economic and environmental resources of the Lower Pioneer Valley region.

Cooperative Area Manpower Planning Systems (CAMPS), consisting of manpower agencies concerned with employment, training, education and manpower development agencies both public and private in Hampden, Hampshire, and Franklin counties of Western Massachusetts. CAMPS endeavors to achieve coordinated planning and execution of manpower training, education, and employment opportunity programs in the Lower Pioneer Valley region. Professor Max Wortman not only serves as Chairman of the Planning Sub-Committee, but also as Chairman of the Governor Sargent's Advisory Committee on Manpower; the Director, CEBER, serves as chairman of the research subcommittee of the Springfield area CAMPS. These services present possible opportunities for both applied research or consulting projects and colloquia for faculty and students interested in problems of manpower, education, employment, organizations, etc.

Luncheon Menu Planning for a ten-school Primary and Secondary Education System in Massachusetts. This project would be concerned with an adaptation of the computer-assisted menu planning system developed by Professor J. Balintfy.

Development of Marketing Plans and Programs for New Products. CEBER has referred several Marketing faculty members to two different firms in Massachusetts concerned with marketing plans and programs for their new products.

Financing, Acquisition, and Uses of Bureau of Census Computer Data Tapes. CEBER has taken initiatives for the formation of a U-Mass., Amherst consortium of the Center of Population Studies, the Research Computing Center, the Bureau of Government Research, the departments of Sociology, Economics, and Agriculture Economics, and possibly the University library. The purpose of this consortium would be to coordinate the financing, acquisition and uses of these Bureau of Census computer data tapes for teaching, research and services involving study and analysis of census information pertaining to marketing, sociology, demography, etc. CEBER may also serve as the channel through which the U-Mass, Amherst community might relate its purposes with those of industry, business and government.

III. Financial, Technical, Clerical, and Promotional Support

Publication of Articles and Brochures. "Should the University Become a Management Consultant" an article in the summer 1969 edition of the Educational Record, Journal of American Council on Education, Washington, D.C., describes in somewhat generalized terms objectives and policies, and some specific examples of CEBER's activities. In the May, 1970 issue of Industry Magazine published by the Associated Industries of Massachusetts, Boston, Massachusetts, is an article entitled "Greater Springfield's Urban Industrial University Complex" which highlights CEBER's efforts described above. Similarly in the December, 1970 issue of the U-Mass Alumnus, another article entitled "SBA and the Challenge of Urban Quality" contains publicity for CEBER.

CEBER Brochures. During the winter, 1970-71, with approval of the Chancellor and the President, approximately 6,000 CEBER brochures were mailed to business, industry, and government agencies throughout the Commonwealth to invite the attention of these groups to the capabilities of U-Mass-Amherst faculty and student talent and facilities. CEBER offered sources of applied research, consultations and continuing education. A significant variety of projects may be initiated as a result of responses to the CEBER brochure and we are contacting and meeting with respondents. Faculty are being asked to participate as tangible projects evolve.

Other Support Services. As reported for the academic year 1969-70 CEBER staff performed clerical and stenographic services for 43 faculty of SBA. In addition, CEBER staff maintain bookkeeping records and prepares and expedites purchase requisitions and student timekeeping and payroll services for thirty SBA faculty and involving 24 different research accounts. These activities have continued to expand during 1970-71.

CEBER's Research Advisory Committee developed criteria, policies, and procedures for allocating University funds made available for SBA faculty to work under modest grants during summer months. To date, most such funds have come from grants by arrangements with U-Mass, Amherst administration. The Director has acted on behalf of SBA faculty requests for research funds granted by the University Research Council. In the future, funds derived from CEBER's contract projects and programs described above may be used to defray stipends for pre and post doctoral efforts by SBA faculty and qualified graduate students.

January 1971

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Appendix F

Business Advisory Council

School of Business Administration

University of Massachusetts

Amherst

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140 West 51st Street, New York, N. Y. 10020

Mr. Herman Stuetzer, Jr.
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60 Broad Street, New York, N. Y. 10004

THE MURRAY D. LINCOLN
campus center
UNIVERSITY OF MASSACHUSETTS
AMHERST 01002

OFFICE OF THE MANAGER
413/545-2523

June - 1971

The 1971 Annual Report of the Manager outlines the fundamental operations and respective areas of the Campus Center. Charts and financial facts have been held to a minimum as in most instances they would be a duplication of our Annual Budget or quarterly Balance Sheet and Profit and Loss Statements.

Since this report covers the opening of the Campus Center, it also expresses the remolded concepts of a new thrust on the part of management.

The organizational development of the Campus Center management is one of involvement of students. The momentum of this redirection has already provided us with positive results and hopefully a rewarding experience for the Campus Center Governing Board members.

With continued cooperation and diligent efforts the Center will continue to improve its service and use to all students and the University community at large.

Respectfully submitted,

Warren T. Grinnan

wtg:lph

ANNUAL REPORT

CAMPUS CENTER - STUDENT UNION

June 1971

The Campus Center and its University Role

Historically, at the University of Massachusetts, the Student Union was a facility that provided students with a place for food, light entertainment, and meeting areas. As the students life style has changed so has the role of the Union.

The student of the '70s wants his "Union" to provide many new services, as well as, the services that the Union rendered in the past. This student's political and social activism on Right, Left, and middle of the spectrum, needs the kind of support that the Campus Center Complex provides;well into the 21st Century. Also the desire to reduce if not abolish the isolation of past University experiences from the real world is being facilitated by the Center now.

The emerging Union-Center Complex provides this University with the many diverse capabilities it requires. The Complex feeds, entertains, houses the university community. It is a staging area for our community to reach out into the real world and a bridge for the real world to come to this university.

Providing these myriad services is the duty of this Center and its staff. The Center seeks to serve and fulfill the needs of two communities - the public and the private.

Report on the Business Office

With the opening of the Campus Center, FY 1971 has been a year of constant change and growth for the Campus Center Business Office. Organizational changes and adjustments had to be effected in order for the Business Office to adjust to the increased volume of work and increased complexities of operations brought about by the opening of new revenue producing departments and the expansion of existing departments.

The Business Office has been structured to function in a staff capacity to all Campus Center operating departments. The Business Office has the basic responsibility for the formulation and administration of financial and accounting

policies and procedures for all operating departments within the Campus Center, (i.e., University Store, Food Services, Accommodations Services, Parking Garage, Print Shop, A.V.A., Games Area, Ticket Office, Physical Plant).

The basic responsibilities of the Business Office are summarized as follows:

1. To establish, coordinate, and maintain, through authorized management, an integrated plan for the control of operations. This function includes the establishment of cost standards, expense budgets, sales forecasts, profit plans, and programs for capital investment and financing together with the necessary procedures for implementation.
2. To measure performance against approved operating plans and standards, and to report and interpret the results of operations to all levels of management. This function includes the design, installation, and maintenance of accounting and cost systems and records, the determination of accounting policy, and the compilation of statistical records as required.
3. To report to government agencies, as required, and to supervise all matters relating to taxes.
4. To provide protection for the assets of the Campus Center. This function includes establishing and maintaining adequate internal control and auditing, and assuring proper insurance coverage.

In order to be most effective in carrying out these responsibilities, the Business Office has been structured functionally. The basic organizational structure of the Business Office is as follows:

CAMPUS CENTER BUSINESS OFFICE

1. Personnel / Payroll Office
2. Cashier's Office
3. Purchasing / Receiving / Property Control
4. Accounting Services / Bookkeeping
   a. Budget Preparation
   b. Systems and Procedures
   c. Financial Statements
   d. Special Studies and Reports
   e. Internal Auditing

f. General Accounting (Bookkeeping)
   1. Cash Receipts and Disbursements
   2. Billing and Accounts Receivable
   3. Accounts Payable and Distribution
   4. Cost Records
   5. General Ledger
   6. Payroll
   7. Inventory Records
   8. Property Records

RECEIVING

By July, 1970, the Campus Center receiving function was fully complemented. All furnishings for the Campus Center, which had been received prior to July and stored in the Physical Plant, were moved to and placed in designated rooms within the Campus Center. Initial furnishings continued to come in large quantities for the following few months. Having completed the initial furnishing of the building, the receiving function has now settled down to its main task of being the sole point for all deliveries to the Campus Center/Student Union. Manned by three permanent and one part-time student employee, Receiving processes an average of 375 pieces of freight per day which arrives on an average of 30 trucks per day. All receipts are expeditiously in-checked, inspected, recorded by means of invoice and receiver log and delivered to appropriate department. Additionally, all conference materials are received, stored if necessary, and delivered to appropriate areas.

I consider one of the most beneficial aspects of the receiving function has been the establishment of a system whereby invoices are only paid when evidenced by a receiver. This prevents erroneous payments of goods not received or over payments. Receiving is, without a doubt, performing a most beneficial service to all departments within the Campus Center.

PURCHASING

All purchasing, accepted salable merchandise and food items, has been consolidated under Equipment Control. This has resulted in improved purchasing practices and better management control. Whenever possible, purchases are made by the bid process. Such features as discounts, quantity buying and quality are always considered to assure that we derive the most for our money.

EQUIPMENT CONTROL

A computer equipment control system called PECAM, (Program for Equipment Control and Management), has been developed and implemented. Through this program, a permanent record of all equipment within the Campus Center is available for inventory and financial management.

A physical inventory of the Student Union was completed in January, 1971, and all necessary data such as purchase date, purchase price, etc, is being added to each item record within the PRCAM program. This will facilitate future inventories and provide accurate property records of both buildings. Generally, management of over one million dollars in equipment is done with a minimum of effort due to our PECAM system.

TIMECARD LABELS

A timecard label computer program was developed and complemented in April, 1971. A considerable saving, (approx. $25.00 per week), has been realized by this computer labels versus the manual typing of individual cards.

PRINT SHOP

The Print Shop has only been in existence since October. It offers various printing services, some of which are not otherwise available on campus or in the immediate area. Its main task has been to determine what services are needed, and by whom.

Unfortunately, space was not originally set aside for a Printing and Duplicating facility in the Campus Center Complex. Therefore, the Shop was put in an area designated for storage, which lacks proper lighting, electricity, heat, etc. Due to confusion over funding of renovations, the Print Shop is still suffering under very limiting and inefficient conditions.

Pricing is differential, based on the customer's affiliation with the University. Students are charged below cost prices, University offices and faculty somewhat higher prices and off-campus and conference groups are charged competitive commercial prices.

Report on the Physical Plant

This past year the Student Union has become a Campus Center comprising the Murray D. Lincoln Campus Center, the Student Union Building, and the Parking Garage.

In general the physical plant department comprises seven areas:

1. Janitors
2. Maintenance
3. Night Supervisors
4. Scheduling and Coat Room
5. AVA and Music Room
6. Games
7. Security

The Personnel breakdown for these seven departments now includes 50 full-time staff, 40 students and 3 professionals. Overall, the year has been a building period, particularly in regard to Personnel.

The physical plant has been holding up well under the thousands of people using it every day.

There has been an excess of vandalism in the building, and the policy of the Physical Plant Department has been to get as much fixed as soon as possible before 9 a.m. in the morning. There has been a great deal of stealing of anything that would be useful or have a resale value. A number of persons have been caught, and in some cases civil warrants have been issued.

The Management is discouraged by the condition of the Student Union building, but can do very little to take care of the situation. Nothing will be done to the building in the coming year as there is no money appropriated in the budget for renovations or repairs.

There has been a large turnover of men on the night shift, but the numbers have been constant because of present labor conditions.

The Physical Plant of the University of Massachusetts has done a fine job of taking care of the physical needs of the Campus Center. They have taken care of over two hundred and seventy-two written requests and many telephone requests in order to keep the building operating.

For night supervision it has been an extremely satisfying year. The three student supervisors have performed varied and difficult duties at the highest level. Absenteeism and illness have been zero for the year. Rapport with the students and staff has been excellent.

The Scheduling Office's most serious problem has been "Growing Pains", as we increased our space available for scheduling. The fact that 8-10 autonomous departments all funnel requests through the Scheduling Office, has resulted in the obvious problems of education and standardization. The Coatcheck and Lost and Found operations seem to be working well.

The scheduling and information area transferred from the Student Union in late August 1970, to an area located in the Campus Center Concourse level. This area is located at an open type designed facility, that has been adapted as an office and information facility. During business hours, the open office area is used for scheduling Campus Center-Student Union events, and the dissemination of information. It is also used evenings and weekends as headquarters for the building supervisors, security men and a part-time secretary. We have also hosted the ARCON guide group with a corner of the desk, and assisted them with phone calls and arrangements.

From July 1, 1970 to May 1, 1971, the scheduling area has generated an income of $3,778.10 for various services, such as display tables, room charges, set up charges and non-university functions. Rental income was $2,826.60 and custodial income was $951.50.

From July 1, 1970 to May 30, 1971, 6,587 registered meetings or events, attracting 516,324 persons, have taken place in the Campus Center-Student Union Complex. There were 138 registered conference and continuing education programs conducted in the Complex facilities from July 1, 1970 to May 1, 1971 with 17,557 conferees attending.

The AVA department from July 1, 1970 through May 19, 1971 handled 1,509 requests. 70% of all the requests were from students. The bulk of free service was used by the students. Continuing Education and Conference revenue was concentrated in equipment rental. 393 requests for audiovisual materials were handled from July 1, 1970 through November 1, 1970, 309 requests were processed during the month of April and 180 requests were handled from May 1, 1971 through May 22, 1971. Film programs of 4-5 double feature films were handled in and out of the Campus Center each week during the academic year. Major events declined during the cold weather, but four big productions were held since April 25, 1971. The music room has proved very popular.

The games area has remained physically the same the past year, with eight pocket billiard tables and one billiard table. Negotiations were carried on all year with the Governing Board Space Committee, to enlarge the facility. A final master plan was presented and adopted in May, by the Governing Board, which gave us adjoining area in the south wing of the old bookstore. Funds to remove and put up dividing walls are not yet clearly designated by the '71-'72 budget; therefore, it is still not specific as to when this can take place.

The rates for the use of the billiard tables was increased on July 1, 1970, from 60¢ per hour to 90¢ per hour. The income from July 1, 1970 to May 1, 1971 was $12,664.38, and the total number of customers was 48,732.

The security area has experienced growing pains and frustrations. The lack of a Campus Security Director has hampered our relations and cooperation with the Campus Police. The very heavy rip-off at the beginning of the year was frustrating but has diminished greatly during the second semester. Security on AVA equipment is very difficult and it now represents our biggest losses. Stability on personnel has been gratifying in that there hasn't been any absenteeism and only one day taken in the nine months of operation.

In general it has been a "building" year which overall has been successful. Areas of consideration for next year will be:

1. Training of personnel
2. Computerize PM program of equipment
3. Standardization of purchasing practices
4. Job descriptions for student staff
5. Streamlined scheduling procedures
6. Increased communications between departments

Report on the University Store

The University Store was phased from its old quarters in the Student Union to the Campus Center Store during the months of July and August. During this period both stores were operated so that there was always merchandise available to customers. Store personnel accomplished moving the entire inventory and office equipment during regular working hours.

At the start of fall classes both the new store and the textbook area in the Physical Plant Building were ready for sales. Things went very smoothly in both areas. The store was easily able to handle customers and at no time was there the congestion of the old store. It was especially gratifying

to store personnel to be able to move freely through the store without having to push through crowded aisles. More merchandise was shelved initially which reduced restocking of fast moving items.

Because of the change in buying habits of students, there was no problem in the textbook area. Sales spread out more through the semester. Evening business was quite slow in comparison to previous years.

Spring rush paralleled the fall.

Retail sales exceeded the budgeted figure of $2,100,000. This in spite of the fact that the fiscal year ended prior to the start of summer school. Supply sales which had been budgeted at $625,000. were greater than $700,000. an increase of more than 23%. Book sales increased by approximately 10%. Total sales increase was slightly less than 14%.

Students in general seemed pleased with the store and many favorable comments were heard from them. The store was kept open two nights a week for their convenience plus Saturday hours moved ahead to conform with the students wishes. New items were added such as typewriters, both for rent and sale, stationary, Minerva Prints; all contributed to an excellent year.

Book sales were good especially when nationally many college stores are in trouble in this department. Customers have been very pleased with the wide range of paperbacks and other non-required books available to them. They also are pleased with the subject arrangement we now have. Much special ordering was done. Research is continuing in the area of ordering proper numbers of textbooks through compilation and analysis of data here and acquisition of material from other major University Stores.

The Lobby Counter is open 363 days a year, selling cigarettes, cigars, candy, newspapers, and miscellaneous items. Check cashing service is offered every week-day evening, afternoon and evening on Saturday, and all day Sunday. The bus ticket office is open every day and evening.

A telex machine was installed primarily for rapid communication between the store and publisher during rush periods. It has proved very effective.

Students were hired specifically as retail sales clerks, operating cash registers for the first time. They were able to work blocks of night and Saturday hours. This worked well during most of the year, however, problems did occur as the semester ended when they began disappearing earlier than anticipated.

Store management personnel attended meetings of the College Stores of New England, the Regional Meeting of the National Association of College Stores. Mr. Wilkes went to Booksellers School sponsored jointly by the American Bookseller Association and the NACS.

The Store hosted the Spring Meeting of the College Stores of New England. The meeting which was held in the Campus Center was considered by many, the best they had ever attended. Mr. Lasher worked very hard on coordinating the meeting. Mr. Cummings was appointed to the Executive Board of the College Stores of New England.

Arrangements were made for the purchase of the assets of the Boston Branch Bookstore by the Boston Campus effective June 1, 1971. This will result in a considerable workload being removed from store and business office personnel during the coming fiscal year.

On the basis of the past year, we are planning to rearrange and better group merchandise in the supply area. We will continue to improve our trade book selection.

CAMPUS CENTER FOOD SERVICES

The financial picture for the Department of Food Service shows us expecting a profit in this startup year. Our forecast is due to the vigorous third quarter (sales of 139% of the average of the first two quarters) and better fourth quarter (sales of 105% of the third quarter). Expectedly high startup costs combined with student unfamiliarity and resistance to the Center in the fall term (1970) caused us to show a net loss of ($36,678.) for the period ended December 31, 1970. The loss was reduced to approximately ($14,300.) in the period ended March 31, 1971.

The budgeted sales of $1,800,000. were predicated on a full year of operation. Our F.Y. 1971 sales will total approximately $1,275,000. The difference stems from two roots. First the budgeted sales of the Cafeteria of $700,000. proved excessive. Second, we opened the new facilities in stages of 1/3 Aug. 1, 1/3 Sept. 1, and 1/3 Nov. 1.

Services

In services the department is oriented to always consider the broad

requirements of the University community. At times certain special interest groups contest this philosophy, however the concept prevails.

The Hatch - Snack bar, ice cream bar, luncheon and weekend blue plate specials, popular prices, lounging area for students between classes, take-out service.

The Coffee Shop - Snack bar service, late night service to students, breakfast for hotel guests, higher prices reflecting greater value of products than Hatch. Open every day of the year.

The Cafeteria - Lunch and dinner Mon. - Fri. at low cafeteria prices. Attracted mostly faculty, administrators, and graduate commuting students.

The Top of the Campus - Medium priced table service lunch weekdays. Steak House dinner service Wednesday through Saturday. Buffet Sunday evening was very popular. Cabaret entertainment Friday and Saturday evening from 9:00 P.M. until 1:00 A.M. for sophisticated entertainment. Lunch attracted University staff and their guests primarily. Dinner attracted about 40% students, 40% University staff and 20% conferees and others.

The Top of the Campus Lounge was open every day except certain holidays and was patronized about 75% student, 25% others (primarily conferees and dinner guests).

Catering - Catering took place all over both buildings and served a very wide variety of requests. The two main sources of business were conferences and university business. Student functions were fewer but significant in a public relations sense. We estimate we served approximately 1100 catered events not including take-out service.

Other - We also tried some significant experiments in order to prototype future service. We operated a Coffee House with student oriented entertainment approximately 15 times. The response was enormous and problems very few.

Other (cont'd) - We also fostered two student operated dining service featuring natural foods and spiritual understanding of food service. These were "The Noodle" and "Hare Krishna". We experiemnted with various services in the cafeteria. It proved quite popular.

Academic Participation

The Food Service Department served as a resource and educator to the University of Mass. undergraduates, graduate students, Stockbridge students, and citizens of the Commonwealth through the Dept. of Continuing Education.

We also collaborated with two professors in the H & R department and one professor in the nutrition department to serve as laboratories for three courses for undergraduates.

Personnel

We employ eight professionals, approximately 65 regular employees, and approximately 125 student and hourly employees on a part-time basis (approx. 20 hours per week).

Our total payroll for this fiscal year will be about $600,000. Of this approximately 1/3 goes to students and hourlies (usually student wives).

Relations with the union have been improving all year long.

The professional staff, without exception, worked at least 25-seventy hour weeks. All other weeks were also long and arduous.

We began a program to begin training students for management roles.

Goals in fiscal 1971 include a more professional approach with particular emphasis on the Catering department. We hope to open a popular rathskellar. We intend to continue to employ as many students as we can and train them to become effective and skillful workmen.

COUNSELING CENTER

UNIVERSITY OF MASSACHUSETTS
Amherst, Massachusetts

A N N U A L R E P O R T

July, 1970 - June, 1971

J. Alfred Southworth
Director

June, 1971

INTRODUCTION

Though many of the more dramatic manifestations of student unrest have diminished over the past year, there has been a substantial increase in direct individual service to students and an increase in the staff's attention to graduate student training. Private or individual student problems do not seem to be on the wane.

The increased investment of staff time and attention to graduate students reflects our mode of responding to mounting student requests for services with a fixed number of professional staff. Through an increase in the number of available graduate student counseling hours we were able to meet a substantially increased individual counseling caseload and, in the same year, give more time to group counseling.

Our data processing services, particularly as they center around our optical scanning equipment and its many applications, have also shown a marked increase that reflects both our growing student enrollment and the increased applications that we are developing for this equipment and its associated supporting hardware.

This year has involved considerable planning around community service activities (additional educative-developmental services, preventive mental health) with an eye to delivering these services in a more timely fashion and in a manner that is more salient and attractive to students.

The reorganization this year of Student Affairs human service departments under one coordinating head has caused an increased optimism and enthusiasm for collaborative efforts with other departments.

Our research staff have produced an impressive output this year and is gearing itself to evaluating our Summer Counseling Program in a more thorough

and systematic manner than we have done previously. This staff is also readying itself to evaluate collaborative community service activities that have been projected for next year.

I. APPROPRIATIONS

		State Funds:	
F-26	1968-69	1969-70	1970-71
03	$12,420	$28,400	$67,606*
F-28	$27,680		
10	250	400	400
11	50	-	-
12	200	350	350
13	4,300	3,000	3,300
14	500	400	300
14'	1,190	1,200	1,310
15	-	-	-
16	-	2,400	3,150

*Drug Center allotment $27,752

Counseling Center allotment $39,854

Summer Counseling Trust Fund #06-39600: *

1969

Income		$95,429.67
Disbursements:		
Refunds	161.00	
Expenditures	$75,802.17	$75,963.17
Cash Balance 12/31/69		19,466.50

* This trust fund's fiscal year coincides with the calendar year.

1970

Income		$94,116.43
Cash Balance 1/1/70		19,466.50
Disbursements:		
Refunds	424.00	
Expenditures	$85,031.80	85,274.50
Cash Balance 12/31/70		$28,308.43

Vocational Counseling Trust Fund #11-41201**

Balance as of 7/1/70		$ 810.92
Income 7/1/70 - 6/21/71		5,923.75
Total cash available		$6,734.67
Expenditures 7/1/70 - 6/21/71	$4,512.92	
Balance as of 6/21/71		$2,221.74

** This is a new trust fund that was started in January, 1970.

II. PERSONNEL

	Number in Each Position			Vacancies
	1968	1969	1970	
Director of Counseling	1	1	1	0
Associate Director	0	1	0	1
Staff Assistant	1	2	2	0
Psychological Counselors	4	3	3	0
Consultants	1/5	0	0	0
Total Professional Staff	6 1/5	7	6	1

	Number in Each Position			Vacancies
	1968	1969	1970	
Junior Programmer	1	1	0	0
Senior Programmer	0	0	1	0
Psychological Assistant	1	1	1	0
Senior Clerk Typist	1	1	1	0
Junior Clerk Steno	1	1	0	0
Junior Clerk Typist	0	0	1	0
Total Support Staff	4	4	4	0
Graduate Student Interns		2	3	0
Graduate Assistants (half-time)		5	4½	0
(Full-time equivalent)		4½	4¼	0

A comparative study of salaries of Counseling Center staff and faculty was made in June of 1971. Comparisons of annual salaries and weekly earning rates of professional staff in the Counseling Center and University of Massachusetts faculty were graphed (Figures I, Ia, II, IIa, Appendix). The professional and graduate student staffing patterns from 1964 to the present are also presented in the Appendix (Figure III).

III. ORGANIZATION CHART

PRESIDENT

CHANCELLOR

VICE-CHANCELLOR FOR STUDENT AFFAIRS

DEAN OF STUDENTS

DIRECTOR OF COUNSELING

Overall responsibility and supervision, including arranging, providing and coordinating psychological counseling and testing services for the entire student body, plus providing related data-processing, training and consulting services to the University community.

Director: J. Alfred Southworth

ASSISTANT DIRECTOR

Assumes directorship in absence of Director and assists with a number of administrative matters, including Summer Counseling testing program and a wide range of psychological testing activities, conducting quantifying institutional studies, consulting on test construction and classroom data-analysis problems.

PSYCHOMETRIST

SR. CLERK TYPIST

RESPONSIBILITIES

In charge of all student and personnel testing. Assists in supervising Summer Counseling testing and other data preparation for Freshmen.

RESEARCH COORDINATOR

Originate, direct, supervise and coordinate research in the Counseling Center.

PROGRAMMER

In charge of all programming and data processing equipment operation in Center.

GRADUATE ASSISTANTS, INTERNS AND TRAINEES

SERVICE AND TRAINING COORDINATOR

Responsible for development and maintenance of quality individual and small group services to students and the training of graduate students in rendering such services.

PSYCHOLOGICAL COUNSELORS

RESPONSIBILITIES

Provide psychological counseling, training and consultaing services.

JR. CLERK STENO

SUMMER COUNSELING COORDINATOR

In charge of developing and coordinating new students orientation program.

IV. STUDENTS AND OTHER CLIENTELE SERVED

Counseling - Academic Year

This year has brought an even greater increase in student-initiated requests for services related to personal growth and development. While the more traditional remedial and corrective services that the Counseling Center has provided in the past are still being offered, there is an ever greater demand of our time for more preventative measures, e.g., consultation, conducting workshops, helping to establish drop-in centers on campus, etc.

Our immediate intake procedure, now in its third year, continues to be a highly successful means for handling initial contacts with students.

The student counseling intake caseload is up 12.5% over last year's numbers. In additional to the 781 students seen this year on intake, another 168 students were screened for group participation and approximately 1,075 were seen less formally on matters of academic advisement, course adds and drops and similar matters related to academic concerns of students.

Group counseling and sensitivity training groups centering around student development more than remedial problems continues to take an ever increasing part of staff time and attention. This year we had a total of 17 groups totaling 168 students.

Our formal student counseling over the past year can be summarized as follows:

Activity	Service Units
Administration	1300
Intake	781
Training	604
Individual Counseling	3993
Research	368
Group Counseling (17 groups, 168 people)	
Total of times met - 187 hours	1694 (total client hours)
Average attendance - 75%	374 (total staff hours)

In addition, 276 service units were spent in formal teaching.

This year our graduate student training was a very broad, comprehensive program. We had three full-time interns, two from the University and one of whom was completing his doctorate from the University of California at Berkeley. Four half-time graduate assistants, one fourth-year Veterans' Administration trainee and one practicum student from the Psychology Department completed the rest of our graduate student staff.

These students had a variety of supervised experiences, such as intake interviewing, supervision, counseling research, individual and group counseling, case staffings, as well as a weekly training seminar.

Testing - Candidates for University Employment

During the year 771 women and 246 men were tested for non-professional positions at the University. Special personnel testing sessions were arranged for high school seniors from all schools in the area interested in University employment. A total of 3,410 tests were administered to employee candidates.

University students

Approximately 230 tests were administered in conjunction with our student counseling services. Non-client students were administered 460 tests.

Other Test-scoring and Data Processing

During the year the Counseling Center has provided test scoring and data processing services for thirty departments on campus and for surrounding schools and colleges. A total of 438,691 documents were processed. This is a 72% increase over last year's figures.

National Tests Administered	1969-70	1970-71
Advanced Test for Graduate Study in Business	117	122
American College Testing Program	48	28
Dental Aptitude Test	11	23
Graduate Record Examinations	1099	1234
Graduate School Foreign Language Test	218	118
Law School Admission Test	218	263
Miller Analogies Test	185	245
National Teacher Examinations	167	284
Naval College Aptitude Test	2	0
Professional Qualification Test	87	47
Veterinary Aptitude Test	31	35
	2183	2399

Summer Counseling Program

Keeping with a tradition established fifteen years ago, the University of Massachusetts offered a Summer Counseling Program for incoming freshmen and transfer students in 1970. Approximately 4,000 freshmen including 340 swingshift students and 900 transfers engaged in a program designed to pre-register each student and to provide him with relevant information about himself and the University environment. A similar program was offered to approximately 100 new freshmen entering the University in January, 1971. The experience gained from this most recent execution of the program is being used to improve and evaluate the 1971 program.

V. FACULTY PUBLICATIONS, RESEARCH AND OTHER PROFESSIONAL ACTIVITIES

Professional activities of the Counseling Center staff over the past year include endeavors in several areas including research, teaching and attendance at national professional meetings. All staff were involved in some aspect of these activities.

Research and Publications

Research activities in the Counseling Center during the past year reflect a wide range of interest and investigation into counseling process, outcome and human behavior.

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Approximately 230 tests were administered in conjunction with our student counseling services. Non-client students were administered 460 tests.

Other Test-scoring and Data Processing

During the year the Counseling Center has provided test scoring and data processing services for thirty departments on campus and for surrounding schools and colleges. A total of 438,691 documents were processed. This is a 72% increase over last year's figures.

National Tests Administered	1969-70	1970-71
Advanced Test for Graduate Study in Business	117	122
American College Testing Program	48	28
Dental Aptitude Test	11	23
Graduate Record Examinations	1099	1234
Graduate School Foreign Language Test	218	118
Law School Admission Test	218	263
Miller Analogies Test	185	245
National Teacher Examinations	167	284
Naval College Aptitude Test	2	0
Professional Qualification Test	87	47
Veterinary Aptitude Test	31	35
	2183	2399

Summer Counseling Program

Keeping with a tradition established fifteen years ago, the University of Massachusetts offered a Summer Counseling Program for incoming freshmen and transfer students in 1970. Approximately 4,000 freshmen including 340 swingshift students and 900 transfers engaged in a program designed to pre-register each student and to provide him with relevant information about himself and the University environment. A similar program was offered to approximately 100 new freshmen entering the University in January, 1971. The experience gained from this most recent execution of the program is being used to improve and evaluate the 1971 program.

V. FACULTY PUBLICATIONS, RESEARCH AND OTHER PROFESSIONAL ACTIVITIES

Professional activities of the Counseling Center staff over the past year include endeavors in several areas including research, teaching and attendance at national professional meetings. All staff were involved in some aspect of these activities.

Research and Publications

Research activities in the Counseling Center during the past year reflect a wide range of interest and investigation into counseling process, outcome and human behavior.

1. Guttman, M. A., and Haase, R. F. Effect of experimentally induced conditions of high and low expertness on outcome during brief vocational counseling. Counselor Education and Supervision, 1971, in press.

2. Guttman, M. A., and Haase, R. F. The generalization of microcounseling skills from the training period to the actual counseling session. Counseling Center Research Report, No. 17, January, 1971.

3. Haase, R. F. Personality correlates of interpersonal interaction distance. Counseling Center Research Report, No. 12,

4. Haase, R. F. Factor analytic constructs underlying the psychological impact of spatial environments. Counseling Center Research Report, No. 22, January, 1971.

5. Haase, R. F., DiMattia, D. J., and Guttman, M. A. Training of support personnel in human relations skills: A systematic one year follow-up. Counselor Education and Supervision, 1971, in press.

6. Haase, R. F., Forsyth, D. R., Julius, M. A., and Lee, R. M. Client pre-training: An extension of the microcounseling paradigm. Canadian Counselor, 1971, in press.

7. Haase, R. F. Counselor behaviors and counselor interventions in the counseling process. Paper presented at the meeting of The American Educational Research Association, New York, February, 1971.

8. Kelly, F. D., and Blane, S. M. Self-control procedures in controlling obsessive-compulsive behavior: A case study, Counseling Center Research Report, No. 21, January, 1971.

9. Markey, M., and Haase, R. F. Ontogenetic features of proxemic behavior: normal and retarded children's responses to social schemata. Counseling Center Research Report, No. 23, January, 1971.

10. Southworth, J. A. Counseling centers' contributions to student needs and personal development. Paper presented at the annual meeting of the American Personnel and Guidance Association, Atlantic City, New Jersey, April, 1971.

11. Southworth, J. A., and Tepper, D. A human relations awareness workshop for secretaries. Paper presented at the annual meeting of the American Personnel and Guidance Association, Atlantic City, New Jersey, April, 1971.

12. Southworth, J. A., Bossi, Eleanor, and Kelly, F. D. Students' guide to sensitivity groups and the human potential movement. The Counseling Psychologist, in press.

Professional Meetings

Several of the staff attended professional meetings through the last year.

Blane, S., Bossi, E., Dumont, F., Galassi, J., Kelly, F., Fuhs, K., and Southworth, J. A., all attended the meeting of the American Personnel and Guidance Association.

Dumont, F., Galassi, J., and Haase, R., attended the meeting of the American Educational Research Association.

Haase, R., attended a workshop in multivariate statistical analysis sponsored by the American Educational Research Association and The Educational Testing Service.

Keochakian, S., and Haase, R., attended the annual invitation conference of The Educational Testing Service.

Galassi, J., attended the annual meeting of The Eastern Psychological Association.

Hamilton, S., attended a conference on freshmen orientation programs.

Southworth, J. A., attended the annual Counseling Center Directors' Meeting in Lexington, Kentucky, November, 1970.

Research Training and Teaching

Several members of the staff maintained an active involvement in research training and teaching throughout the year. Training in research was provided by a variety of formal and informal contacts by staff with three doctoral interns who were completing dissertations. In addition, consultation with staff and students from other aspects of the University on problems of design, data analysis and test scoring was carried on by staff members.

In a more formal sense, several staff members engaged in formal teaching duties throughout the year. Drs. Southworth, Blane and Haase served on doctoral dissertation and comprehensive examination committees in the Psychology Department and the School of Education. Dr. Haase taught an advanced seminar in counseling research and a statistics course in the School

of Education. Dr. Keochakian taught a course in Theories of Counseling through the auspices of the Continuing Education Program.

Dr. Blane coordinated supervisory activities of the Center staff in conjunction with training of students from both the School of Education and the Psychology Department. Eight staff members engaged in supervision of students throughout the year. In addition, Dr. Blane conducted a two-day colloquium on Human Sexuality in the Northeast area.

John Galassi and Frank Dumont similarly offered a 1-credit colloquium in group process in the Southwest area.

Funded Projects

Several research projects currently being conducted received financial support from external funding agencies.

Research monies were obtained from the University of Massachusetts Research Council and the U. S. Office of Education supporting experimental work in the investigation of spatial influences on interview behavior.

VI. MAJOR ACCOMPLISHMENTS

Counseling services to the student population are expanding at a faster rate than the growth of the University. While the student body expanded less than 10% this past year, services to individual clients increased 12%. This reflects, we believe, greater awareness that students have of the Counseling Center and its functions and our increased capacity (because of our strengthened graduate student training program) to meet the needs of students. Our immediate intake policy has most likely helped make our service attractive to students. In the past students were often disappointed and turned away because of long waits for service.

Consultation has taken on increased importance. The ability of well-trained graduate students to carry a significant portion of our caseload has freed staff to perform additional and important consultation functions in the University. It is estimated that our professional staff is giving over 40% more time to consultation and other indirect service than we gave the previous year. Examples include extensive consultations on such critical functions as the organization of Student Personnel human services, the management of drug problems on the campus, counselor education and training in the School of Education, the management of pregnancy problems, the development of an area Drop-in Center and support of a Drug Drop-in Center. We maintain a continuing consultation service on psychological research, on test development and on Digitek applications for many members of the University faculty and administration. Other related efforts include coordination of data collection and analysis in departmental research. Consultation with Personnel and Security staff has resulted in an improved approach to police officer selection.

Considerable time has gone into planning human services for the coming year. One major outreach program for the Northeast area is being worked out at present. Cross-departmental discussions have been held on providing stepped up direct and consulting services for career counseling to undergraduates, developing a broad multi-level counseling service for students in the Southwest Area, and participating in a new training program for staff in this Area.

Research is increasingly assuming a central role in the Center as we focus on our need to evaluate what we are doing. A design has been developed for evaluating the Summer Counseling Program. Plans are underway to assess the planned outreach program for the Northeast Area. More formalized experimental research has been conducted in the areas of proxemics, personal

services to students. Consultation is being extended increasingly to faculty and more training functions are being extended to students and administrative groups. Planned decentralization of counseling services and the development of service programs make our training and consultation to students and staff increasingly valuable and critical.

Personnel

There continues to be a steady need for additional personnel. With the changing nature of the Counseling Center's functions (more consultation and outreach activities) there is a need for professional staff with special skills. For example, we could very profitably use the service and research skills of a person trained at the doctoral level in psychological measurement. We are fortunate in having been able to replace one of our staff with a community psychologist who will join us next fall.

We are deficient in secretarial support. Many of the staff are not using secretarial assistance because there is not enough to go around. Anticipated shortages in 03 money make this concern more critical than it might otherwise be. The Center could be more efficiently run if a Principal Clerk with exceptional administrative skills were assigned to this Service, and a clerical assistant assigned Mr. Rutherford to relieve him of more routine activities.

There is a great deal of need for upgrading among support personnel. Our receptionist's position, which is very demanding, was downgraded this past year. It needs to be restored or upgraded. We need also to improve our psychometrician's grade 8 position. Over the years additional variety and more complex administrative assignments have been tacked onto this position such that it demands more varied and complex skills and attention that it once required.

There is a continuing need to attend to Center personnel matters in a

sensitive and concerned manner. This is particularly true with a humanistically oriented staff who expect, or at least hope, for the same kinds of consideration from others that motivate them in their work with students. This calls for highly individualized attention to personnel matters of salary, promotion and the like.

The staff has under consideration the development of a new set of titles that will provide a wider range of promotional opportunities than now exist. We hope to establish a professional line of advancement (in addition to the present administrative avenue) that will allow formal recognition of levels of competency as professional counselors.

Salaries are extremely sensitive matters for all staff. This is certainly true for professional staff whose salaries are more subject to influence by the decisions of others than is the case with nonprofessional staff. Our staff frequently looks at faculty salaries in an effort to determine how much value the University puts on its services and other activities. There are some marked differences. Figures I and Ia (based on earning rates rather than actual salaries) throw these differences into boldest relief. Figures II and IIa based on actual salaries and adjusted salaries indicate that actual salaries for our young but experienced doctoral level staff are over $1,000 lower than mean salaries for University of Massachusetts faculty. It is hoped that this analysis will lead to marked improvement in salaries the next time we have an opportunity to change them.

The kind of personnel support we have had over the past seven years is shown in Figure III. How this has been translated into service and other professional activities makes up a large portion of earlier portions of this report.

Facilities

Our physical facilities are attractive but barely sufficient now to house the staff and facilitate the functions planned for the coming year. As our staff and graduate training program increase in size we shall need to look for alternate spaces or additional spaces to those we now have.

Equipment

We have been rather fortunate in obtaining equipment to support our services, training and research functions over the past three years. We are currently in need of an office-type Zerox machine and several portable tape recorders. Efforts are being made to find funds to make these purchases.

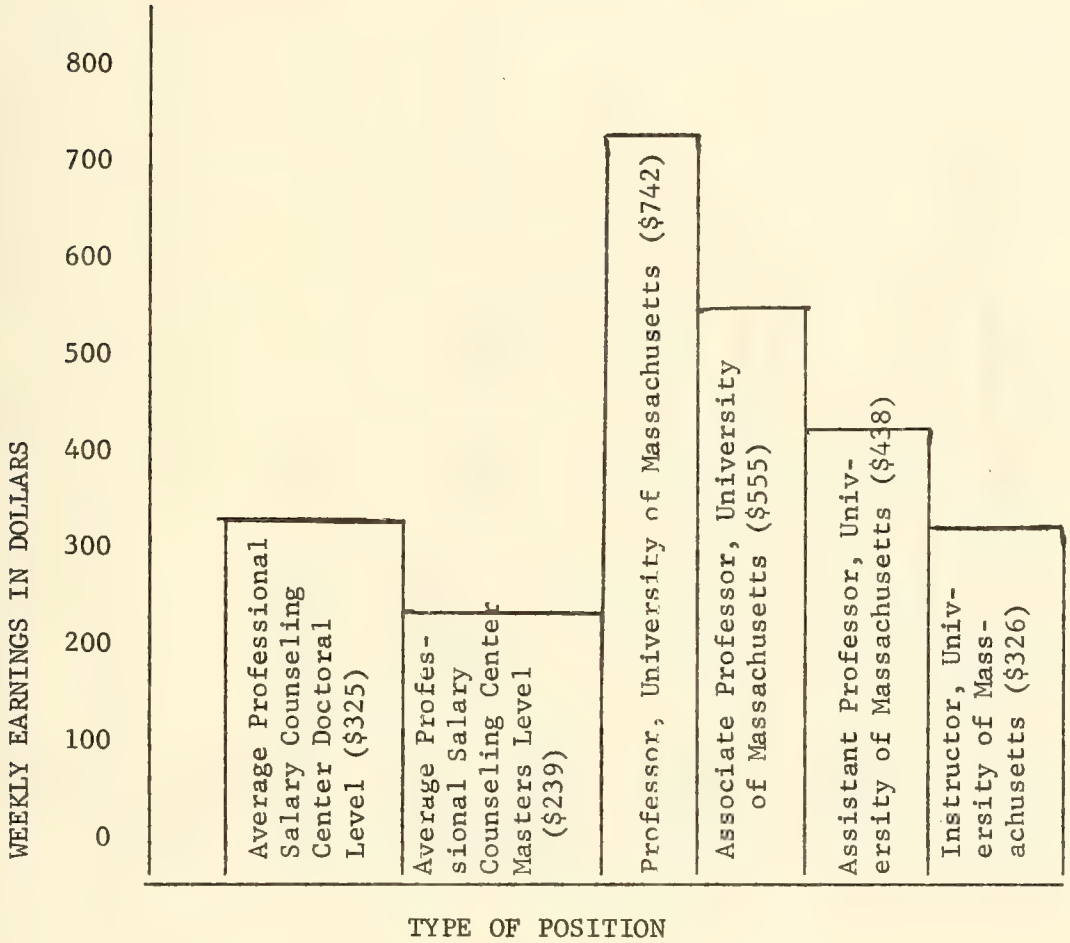
IX. APPENDIX

Annual Report, 1970-71
Counseling Center
University of Massachusetts
Amherst, Massachusetts

FIGURE I

AVERAGE WEEKLY EARNING RATES* OF FACULTY AND COUNSELING CENTER PROFESSIONAL STAFF AT THE UNIVERSITY OF MASSACHUSETTS IN AMHERST

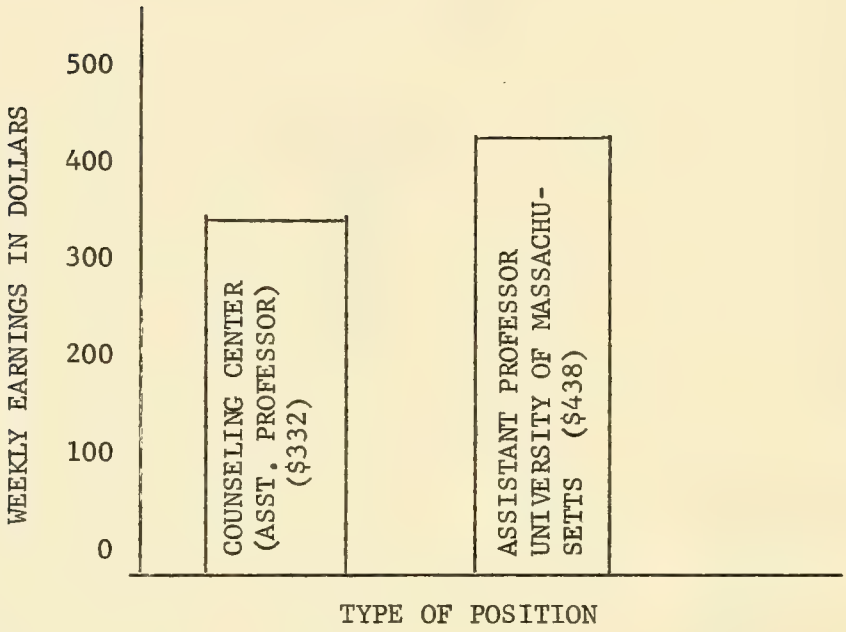
6/1/71



*Based on 48 weeks of employment for Counseling Center Staff and 32 weeks for faculty.

FIGURE Ia

AVERAGE WEEKLY EARNING RATES* OF FACULTY ASSISTANT PROFESSORS AND COUNSELING CENTER STAFF WITH CROSS APPOINTMENTS AS ASSISTANT PROFESSORS

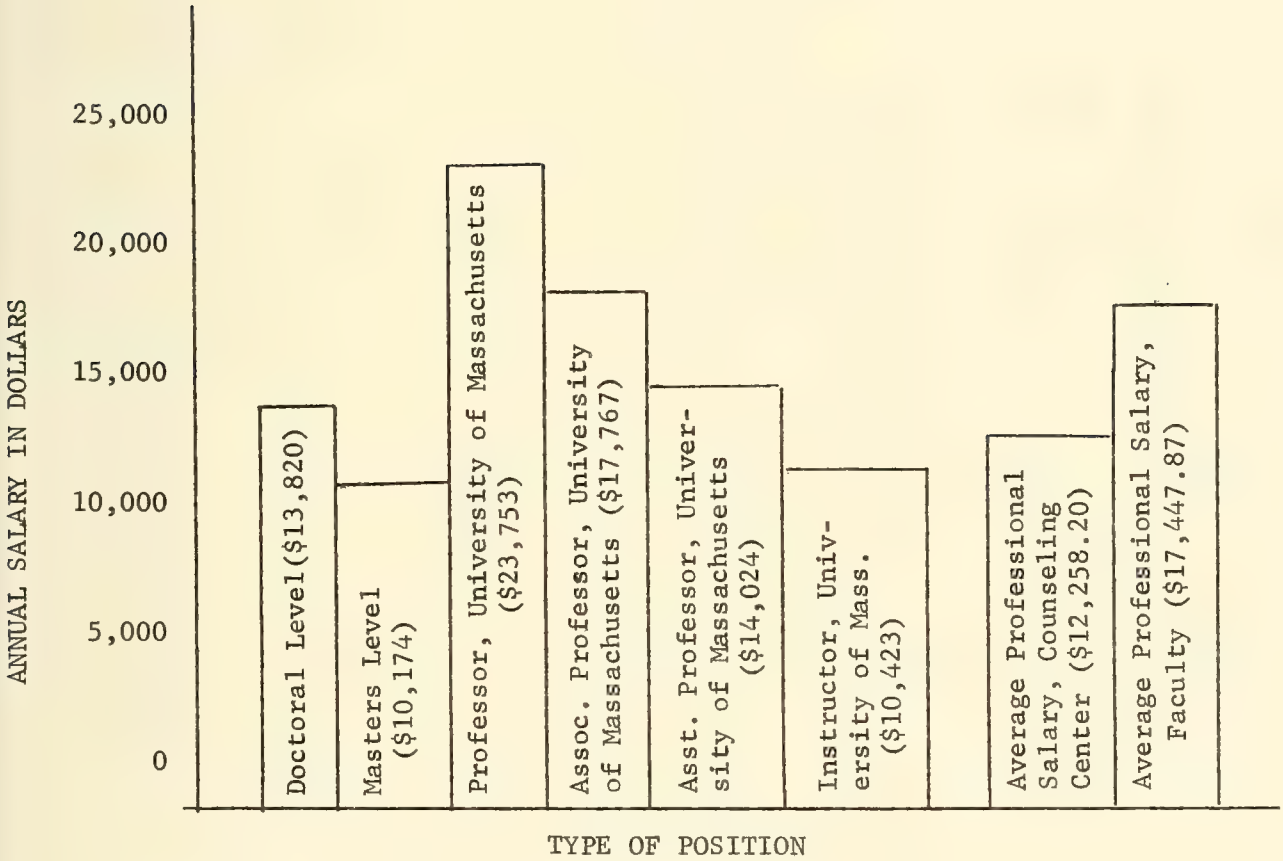


*Based on 48 weeks of employment for Counseling Center Staff and 32 weeks for faculty.

FIGURE II

AVERAGE ANNUAL SALARIES OF FACULTY (UNIVERSITY-WIDE) AND COUNSELING CENTER STAFF AT UNIVERSITY OF MASSACHUSETTS IN AMHERST

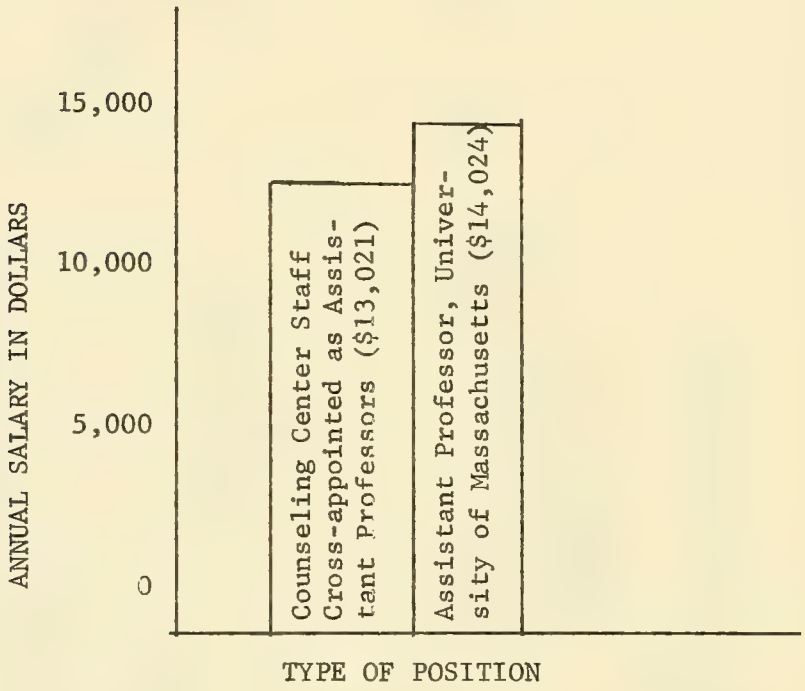
6/1/71



*All salaries nine months or adjusted to nine months.

FIGURE IIa

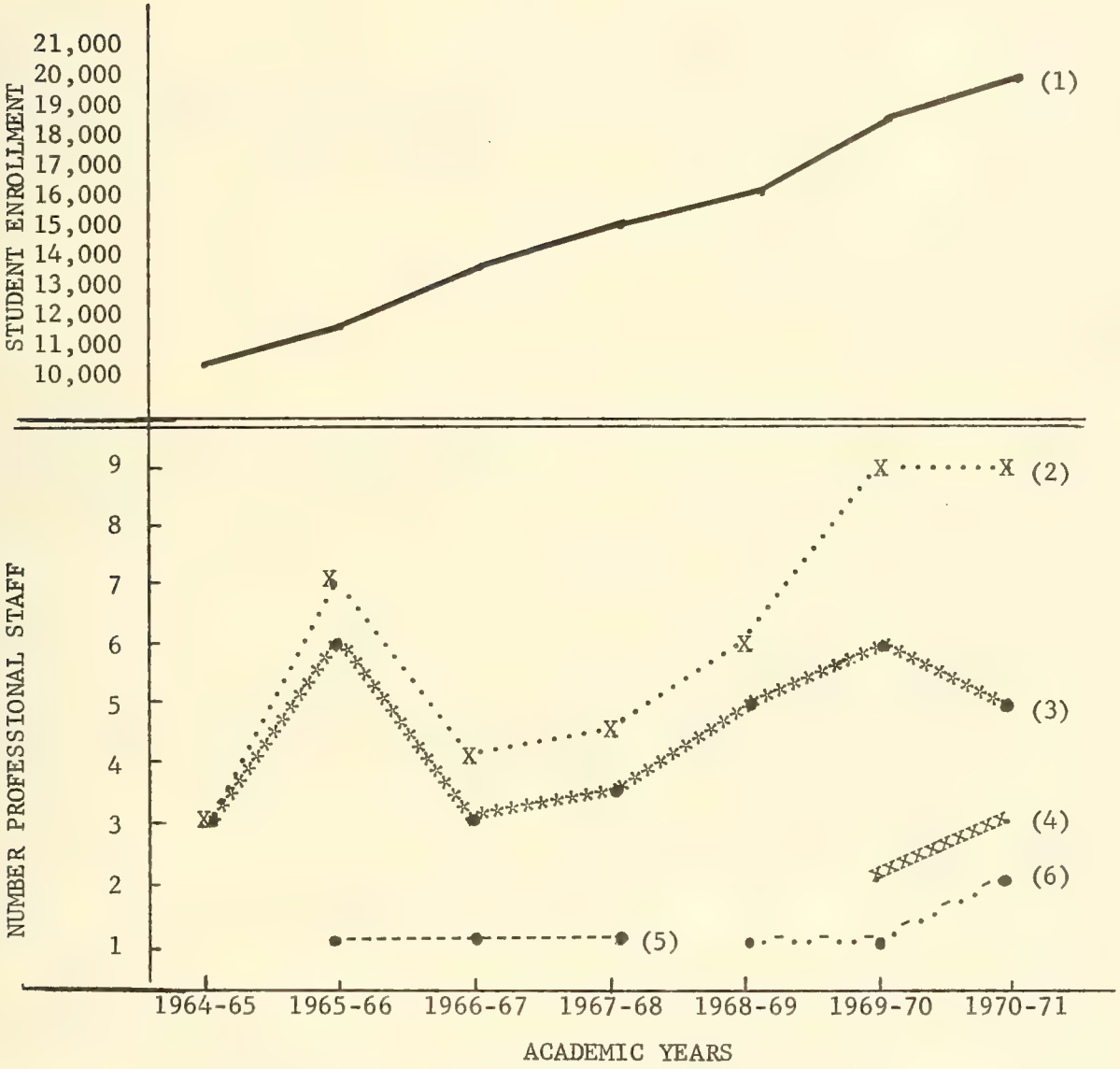
AVERAGE ANNUAL SALARIES* FOR FACULTY (ASSISTANT PROFESSORS) AND COUNSELING CENTER STAFF WITH CROSS-APPOINTMENTS AS ASSISTANT PROFESSOR



*All salaries nine months or adjusted to nine months.

FIGURE III

GROWTH OF COUNSELING CENTER PROFESSIONAL STAFF
COMPARED WITH GROWTH OF AMHERST CAMPUS, 1964-1971.



(1) Student Enrollment
(2) Total Professional Staff Including Interns
(3) State Supported Professional Staff
(4) Interns
(5) Grant Supported Staff
(6) Trust Fund Supported Staff

UNIVERSITY OF MASSACHUSETTS

AMHERST

ANNUAL REPORT OF THE DEAN OF WOMEN

JULY 1, 1970 - JUNE 31, 1971

1968-69	1969-70	1970-71
1. Appropriation	F-21	F-21
The Dean of Women's budget was merged with Asso. Dean of Students under the general Student Personnel budget.	03 $100 10 125 13 500 14 250 14-1 250 $ 1,225	03 $100 10 125 13 700 14 200 14-1 $ 1,125 (other items in F-23)
2. Personnel		
26 former staff members (Professional assistants, Heads of Residence, and Senior Clerk/Stenographer) were transferred to the Asso. Dean of Students.	Junior Clk./Stenographer	Junior Clk./Steno.

4. Student Clientele

The Dean of Women has continuing concern for educational and personnel policies which effect all women students. Since 1967 assigned responsibility has been for off-campus women, including sororities.

1968-69	1969-70	1970-71
Total women undergraduates		
5,457	6,505	6,548
Off-campus women		
1,200 approximately	1,645 approximately	2,162 approx.

5. Professional activities

Massachusetts Association of Women Deans and Counselors (High School Guidance & College Deans) - State President (completed two-year term.)

National Association of Women Deans and Counselors ----Participating member of board of State Presidents. Attended national convention, St. Louis, March 1971.

Horace Smith Fund (Springfield)---Member of Board of Incorporators; assisted with grants to UM students.

New England Association of Colleges & Secondary Schools - Represented MAWDC in Annual Conference in Boston, December, 1970.

College Entrance Examination Board - On panel in program of regional meeting, Manchester, New Hampshire, February, 1971.

Massachusetts Society for the University Education of Women - Chairman of Deans Advisory Committee; arranged interviews and made recommendations for scholarships for UM students.

American Association of University Women--- Liaison for University of Massachusetts; member of local branch.

6-7 Accomplishments & Programs

Offices at #235 Whitmore served "Off-Campus Student Affairs." In addition to the Dean of Women, the Fraternity Manager and the Greek Area Coordinator were located here. The Dean of Students' Assistant to confer with commuter men had to be located in #227 which was a less convenient arrangement than in the preceding year. Much credit for the friendly and efficient operation of the office is due to Marsha Middleton and Betty Lannon, secretaries, who work well together and are always responsive to the many students coming to the office.

Availability for any off-campus student to come for any reason proves to be very important. Fifty percent of my time was given to individual interviews, the balance to meetings of groups and organizations and to off-campus public relations and professional activities noted in paragraph five. Regular appointments included Presidents of Honor &/Service Societies, Alpha Lambda Delta, Gamma Sigma Sigma, Mortar Board, and of Sororities, Panhellenic Council, and occasional conferences with other student leaders.

New commuters were reached by mail and meetings which started some contacts. Others came to the office by referral or at their initiative for special scheduling, "incomplete" grade recommendations, withdrawals from courses or from the University - procedures which are routine but which often lead to disclosures of personal problems. Cooperation with Health, Mental Health, and Financial Aids offices gave additional assistance when needed or desired.

Many students move off-campus seeking less expensive living. Too often this is accomplished by over-crowding in apartments or houses, creating more problems for themselves and the community. Inadequate allowance for food points up their need for basic nutrition and consumer education. Exploration of this was begun with married students and the School of Home Economics and the Extension Service.

The former commuter's club is no longer feasible because of the wide discrepancy in ages, interests, and commuting distances. A better objective has been to encourage commuters to find their places in the variety of existing organizations. Scrolls have been helpful to some Freshman girls in this respect. The new Commuters Assembly gave wider representation in government and in allocations of their share of student taxes. One allocation was toward a University Day Care Center.

In counseling off-campus women, I have come to know many married or separated women who are attemping to complete their degrees; they have ability and high motivation but are often encumbered with personal problems. Some have responsibility for small children and would be greatly helped by availability of a Day Care Center while the student-parents are in class or at work. Some are returning former University of Massachusetts students; many are transfers. They need information about opportunities and procedures and referral to the right sources; they need counseling to help them define their own goals, problems and alternatives. I am participating in a Married Students Committee, recently initiated by Mr. Siddall of Mental Health and authorized by Vice Chancellor Bromery. The Committee hopes to extend University services to married students.

In the administration of the Margaret Hamlin Fund and emergency funds, I have learned of many critical problems and I am aware of great need for more scholarships for women at the University of Massachusetts. Although women excell in academic achievement they receive less than the University of Massachusetts men in scholarship assistance. Part of my work has been to promote more financial aid for students from outside organizations - The Massachusetts Garden Federation, Worcester Alumnae, Women's Clubs, MSUEW, Horace Smith Inc., AAUW, and Alpha Lambda Delta - but more assistance is needed. This is particularly true for women continuing their education after an interruption. Lack of adequate financial support from parents, scholarships or employment means that many women students go into debt to complete the bachelor's degree. Many talented women students who want to go to graduate school must postpone or abandon the goal.

Because of my continuing concern for educational opportunities for women, and for personnel policies which effect them, I have been involved in efforts to survey and to improve the status of women at the University of Massachusetts. (Note Addenda to my reports of the last two years.) The Faculty Senate has now added a standing committee on the Status of Women on which I will serve.

Adding the staff member, Mr. Paul Stevens, serving as Greek Area Coordinator, has been of great assistance, particularly in better organization of the new "Greek Council" activities and in officer-training. I have continued work with sororities and Panhellenic Council and continue as university-liaison with sorority resident advisers and in the recruiting and selecting of new ones where needed.

Sororities have contributed positively to the personal development of their members. Fine calibre upperclassmen have given leadership in sorority ideals, high scholarship, and conservative standards of behavior. The influx of younger members who have experienced wide freedoms in dormitory life is now effecting sororities. Social amenities are less and less important; rules about parietals and liquor are being relaxed. National Councils which have held chapters to strict house rules in the past are leaving decisions to local chapters - which under UM administration policy means student autonomy. Student autonomy in these matters means wide latitude for personal affairs. The peer influence is so strong among young people that it cannot be expected that many - or

even any - residences will vote to impose restrictions while others have personal freedom. "Diversity" in basic life styles in university residences sounds very good for publicity but is really a myth. Increasing numbers of the strongest and most loyal workers on alumnae advisory boards are disenchanted and are turning over volunteer duties to others. "Small group living" has value and appeal but its higher costs have a negative influence on sorority membership. What the future may be would be hard to predict.

8. Future plans and needs: The following are needs of the University of which I am aware.

   1. A top level study of the fraternities and sororities of the University of Massachusetts with a view to acceptance of fraternities and sororities as a part of the university residence system of "small group living centers."

   2. Information about UM student life needed at the secondary school level. Repeatedly it has been said by High School Principals and Counselors that the University of Massachusetts does an excellent job of describing and interpreting academic opportunities and admission requirements to High Schools, to their students and parents, but gives no conception at all of the student life at the University and what the requisites are for survival in personal and social life as well as in academic areas.

   3. Part-time students have demonstrated strong motivation and persistence and a large percentage of them have been high achievers. There should be a much larger admission of part-time students in regular degree programs of the University.

   4. The University should give recognition to students with excellent academic achievement. Still true is the Greek philosoper's statement, "What is honored in a community will flourish there." Recognition and publicity should be given to those achieving membership in National Honor Societies, to those attaining University Honors List each semester, to those completing Senior Honors projects and to those graduating from the university with honors. Recognition is gratifying to those deserving it, may be stimulating to others, and indicates to the public what the university values.

   5. Financial problems of students point up the need for promotion of more scholarship-giving by private organizations in communities throughout the Commonwealth. Many are generous but the university has done very little to recognize, or to promote good relations with, these donors, or, to acquaint students with these potential sources of financial assistance.

Respectfully submitted,

Helen Curtis

Helen Curtis
Dean of Women

6/14/71
HC/mbm

ANNUAL REPORT

1970-1971

SCHOOL OF EDUCATION

UNIVERSITY OF MASSACHUSETTS

"The School of Education's programs generate special promise in an area that other disciplines have long ignored at the peril of our young. The uniqueness of these explorations occasion understandable and proper concern as to whether or not departures from traditional academic practices will work. But this cautionary counsel taken seriously, as I am sure any wise administrator such as Dean Allen will take it, the recent advances in the School of Education are undeniably ones of superb innovation and of basic wholesomeness. A great university can always live with an unsuccessful experiment. It can always reform where it has tried. But it can never advance without experiment and risk. It is high time that new approaches in a field not notable for its past scholarly successes be undertaken."

President Robert Wood
April, 1971

The Commonwealth of Massachusetts
University of Massachusetts
Amherst 01002

SCHOOL OF EDUCATION

August 9, 1971

Chancellor Oswald Tippo
Whitmore Administration Building
University of Massachusetts
Amherst, Massachusetts 01002

Dear Chancellor Tippo:

I am pleased to forward the attached Annual Report of the School of Education as part of your data for your Annual Report to the Board of Trustees.

Though the School continues to have growing pains, our progress has been substantial and even dramatic. It is hoped that this Report will provide you with a comprehensive overview of our progress and objectives and will assist you in answering questions about the School as they arise.

Sincerely yours,

Dwight W. Allen, Dean

DWA:mgw

ANNUAL REPORT

1970-1971

SCHOOL OF EDUCATION

TABLE OF CONTENTS

I	Overview	1
II	Future Plans and Needs	7
III	Organizational Chart	10
IV	Support Tables	11
V	Enrollment Statistics	13
VI	Funded Projects	15
VII	Faculty Publications and Professional Activities	27
VIII	Centers	44
IX	Special Programs and Projects	75
X	Audio-Visual Center	94

School of Education

Overview

1968 marked a major turning point in the development of the School of Education. With the advent of a new Dean plus substantial numbers of new faculty members and graduate students, the School embarked on a voyage which was soon to draw the attention--sometimes admiring, sometimes horrified--of viewers not only within the University, but even across the nation. The institutional ship belonged to the "Ed School" class--better known for their ability to ride at anchor for many years than for a capacity to undertake long voyages at speed. Its destination was unknown. The Captain soon made clear his intention to sail only in unchartered waters. Its crew was quite content to risk grounding on some unsuspected reef in order to gain the New Educational World.

Our ship's log now covers a period of three years. The first was one of introspection. Building almost from the keel up, we attempted to consciously re-examine basic assumptions underlying the School; rejecting some, accepting others, and above all finding new ones to be tested. The goal was to create an institution which would facilitate the process of change and innovation instead of hindering it. The second year was oriented towards implementation. For the first time we got the chance to test the meaning of our work with deeds. In so doing, we found the weak areas in our planning and continued to make new plans to fill such roles.

The third year of our voyage is now complete. If it must be briefly characterized, perhaps the idea of consolidation would do so best. The School of Education has spent the last 12 months improving and modifying existing programs, strengthening administration, and trying to solve its problems. Indeed, we have consciously slowed the pace of our expansion somewhat in order to devote maximum time and energy to this process of re-examination.

This does not mean that we have changed our basic goal: to develop and test, and implement viable educational alternatives. We are still

plotting our course in unchartered waters. But we have slowed our engines somewhat while we plug the minor leaks that are bound to appear when any new vessel first takes to the water. We expect that this will eventually allow us to sail even faster and explore even further.

One of the best examples of this is our teacher education program. By 1970, it had become painfully clear that it was beyond the ability of any one segment of the School to effectively run such a program. There were simply too many students to be served, each with his own individual needs and goals. And so, early this year the School created the Teacher Preparation Programs Council (TPPC) with a mandate to encourage participation by the entire education community in teacher education. The Council did just that. Next year will see the entire School of Education mobilized to serve future teachers. A wide variety of separate programs will be supported by the necessary administrative and counseling services.

The TPPC and its work illustrate well what we mean by consolidation. To us the word implies neither retrenchment nor a halt. Rather, we have sought and will continue to seek to recognize our weaknesses and to deal with them creatively and forcefully. The TPPC's program is new, experimental, and even audacious. Yet, it is designed to greatly improve our ability to serve a major portion of our clientele, and thus to eliminate a weakness which had begun to haunt us.

As we began our intensive examination of the School of Education's successes and failures, we looked forward to the report of the School of Education Review Committee. Obviously, an objective and impartial critique of the School would greatly assist us in self-improvement. In this hope we were disappointed. We have presented in writing to the Faculty Senate a detailed response to the report. Let it suffice to say here that the document's partisan rhetoric testifies to its non-objectivity, while its questionable methodology prevents any insiteful commentary. Not only did the report fail to assist us in our consolidation efforts, it actually hindered us. We have had to divert our resources to demonstrate its failures rather than use them to correct our own failures.

As a community, then, but without the hoped-for help from our University colleagues, we have spent a year in re-examination and improvement. TPPC is not the only example. Our annual report lists many others. We have amended our constitution to streamline our governance, and grown more proficient in its day-to-day operation. We have continued to increase the University's sphere of influence through our off-campus programs. We have vastly expanded our counseling and advisement role, appointing a new Assistant Dean to head a much larger student affairs staff. We have united many diverse innovational programs under the banner of alternative schools, and we are looking forward to several tests of this concept in real schools. Our learning centers have mirrored our commitment to consolidation in their own activities, as they reviewed their separate programs. Yet, we have not stopped modifying our ship. On the superstructure already described stand two new masts - each a commitment to a novel thrust in our work. One is a promise to combat racism in our own school and in the institutions we serve. The other is a commitment to restructure our curriculum on a completely modular basis. We have focused our planning efforts on these two areas in the belief that they compliment the work which we have already done and offer a logical, indeed a necessary, extension of that work.

At a retreat on Nantucket Island this spring, representatives of the School of Education decided to make the elimination of racism our highest priority. The School Council quickly ratified this position. Its rationale is based on two assumptions: first, that racism is the most virulent and dangerous disease infecting our society today, and second, that no person or institution can claim to have completely escaped its scourge. The implications of these beliefs for our endeavor are obvious. We must begin by healing ourselves. And we must also use our skills and influence to help heal others.

It is painfully clear that education has played a major role in perpetuating racism. Thus, it seems only appropriate that it make amends by leading the fight against this blight. Already this year we have begun to carefully examine our own individual and institutional capability. We are beginning to mobilize our resources to deal with the

problems we find. Furthermore, we are actively seeking ways to influence and assist other educators and schools. Much of this activity has centered in our off-campus programs, for it is here that we travel furthest from many ivory tower theories and closest to real world problems. One good example of our work is our deep involvement in Career Opportunity Programs--in Brooklyn, Springfield, and Worcester. Here we are helping paraprofessionals, often from minority groups, climb above socially defined career barriers towards full-scale participation as teachers and administrators. Not only does this help fight discrimination against specific groups, it will eventually help bring our pluralistic society into heretofore monochromatic classrooms. Another example is our support in many diverse ways of specific schools serving specific minorities: Indians, Blacks, Puerto Ricans. These are only first steps, but they are honest, and they will be followed by larger strides.

This year the School Council also approved a resolution, repeated verbatim later on in this report, committing us to the development and, if possible, the implementation of a completely modular curriculum. The Carnegie Foundation has funded our planning effort, which is well under way. According to the current schedule, September of 1972 will see a radical restructuring of our programs.

The basic idea is simple: replace courses and credits with modular courses and modular credit as basic structural building blocks. Yet, the potential of such a change is great. Traditionally scheduled learning experiences will still be possible, but they can be allied with atypically scheduled offerings. Faculty will be able to teach more nearly what they feel is apporpriate to teach without padding or cutting their material. Students will be able to meet their own needs more exactly. And a whole new set of options (such as open ended seminars and intensive learning sessions) will be added to our educational repertoire.

The administrative challenges involved in implementing a completely modular curriculum are certainly great. We believe they can be met. The Carnegie grant gives us the resources, including a faculty member with fulltime responsibilities to meet them not just adequately to the program, but with distinction. And the ultimate benefits of this

program should be felt not only within the University, but all over the nation.

This, then, is the tone of our third year: overall consolidation highlighted by two major thrusts in new directions. There remains only to say that, in my own opinion, we have had a highly successful year. It has not been an unqualified success, for we still cling tenaciously to the right to fail. There can be little question, however, that the School of Education has demonstrated the viability of an institution devoted to constructive innovation and experimentation. It is now highly probable that our growth and momentum, far from being a transitory phenomenon, will continue to be augmented in the future. We hope that in some way, our successes will be a victory not only for the School, but for the University and the society which it serves.

Dwight W. Allen
Dean

SCHOOL OF EDUCATION

Profile

As the School has grown larger and more complex, the need to develop a method of communicating who we are, how we operate, and what we are about has become increasingly pressing. We are, therefore, in the process of publishing a School of Education Profile which we believe will save many hours of faculty and staff time now devoted to describing the School to interested outsiders as well as be an exciting, attractive, and unique approach to the conventional school catalogue.

The Profile will come in a printed box of book size. The box will hold some ten different printed pieces, each giving a different perspective on the School or highlighting a different area of its activities. The material will include pictures and drawings, statistical data, excerpts from School and other publications, Marathon Schedules, a personal statement from each member of the instructional staff, as well as descriptive material on the nature of the School, its activities, its governance, and its degree programs. The box format will allow us to add or delete materials when appropriate in the future or make changes in one section without having to reprint the entire Profile, as would be necessary in a conventional one volume catalogue.

SCHOOL OF EDUCATION

Future Plans and Needs

Facilities

The extraordinary growth in enrollment and programs in the School of Education has created a severe shortage in available space to house faculty, classes, activities, and a diversity of special projects. The year 1971-72 will see cramped conditions which will impair the development and limit the implementation of important educational programs. Hopefully, this situation will be eased somewhat by the availability of new modular space units by September, 1971.

Until a new School of Education building is available, it is hoped that every consideration will be given in assigning some space made available by the opening of the Graduate Research Center to the School, and, hopefully, the proposed modular space requirements.

An additional requirement exists. If the University wishes to continue its association with the Amherst Public School System through its participation in the Marks Meadow Elementary School, consideration must be given to providing facilities comparable to the other elementary schools in the town. To accomplish this, an Instructional Materials Center must be provided. The Superintendent of Schools and the School Committee have held serious discussions toward this end with the Dean and staff members of the School of Education. The educational needs for such a unit have been well documented. A small amount of additional space will be made available to Marks Meadow when the School of Education Library moves to the Graduate Research Center in August, 1971.

Personnel

The School of Education as pictured in its fourth year of planned change is a reasoned balance of consolidation and selective development. We believe that our planning and actions since 1968 have brought a vitality to our School which is crucial to any successful institutuion and an engagement with the most pressing problems of both public and higher educa-

tion that must be the mission of a first-rate School of Education.

Future personnel plans will be designed to complement this status. Existing programs which have proved worthwhile will be strengthened and expanded where appropriate while other programs will be modified extensively or deleted. In an an attempt to remain in the forefront of American Education, selected new programs will be developed as the need and resources are realized.

Typical of the selected programs under consideration are the following: (1) Special Education - Our position here is that existing programs in Special Education are generally deficient and we have no desire to duplicate thses efforts. We would, however, like to develop a program based on some new models that have a high relation to the Special Education reality in our society today. (2) Futuristics in Education - Plans for a Futuristics Program are based on our belief that the study and application of various futuristic methodologies is an essential ingredient in the understanding of education dynamics. (3) Modular Credit Program - By enabling an academic experience to be structured in a way that is most conducive for the students and subject material (not all academic experiences fit the traditional 3 hrs. a week, 16 weeks a semester mold) the Modular Credit Program has been developed to increase the effectiveness of the learning/teaching experience. The program is an example of our constant concern over not only content but process in curriculum reform.

In addition to the three specific programs mentioned, we will be investigating the possibility of an intense in-service teacher education program for our own faculty and the possibility of extending the School of Education as a resource for in-service education for the University's faculty. Also we are looking towards the development of a commonwealth institute for in-service education for public school teachers. These programs will require and extensive reshifting of current faculty in addition to some new resources. On balance, our faculty needs reflect a concern to bring greater equity in our student/faculty ratio, improve

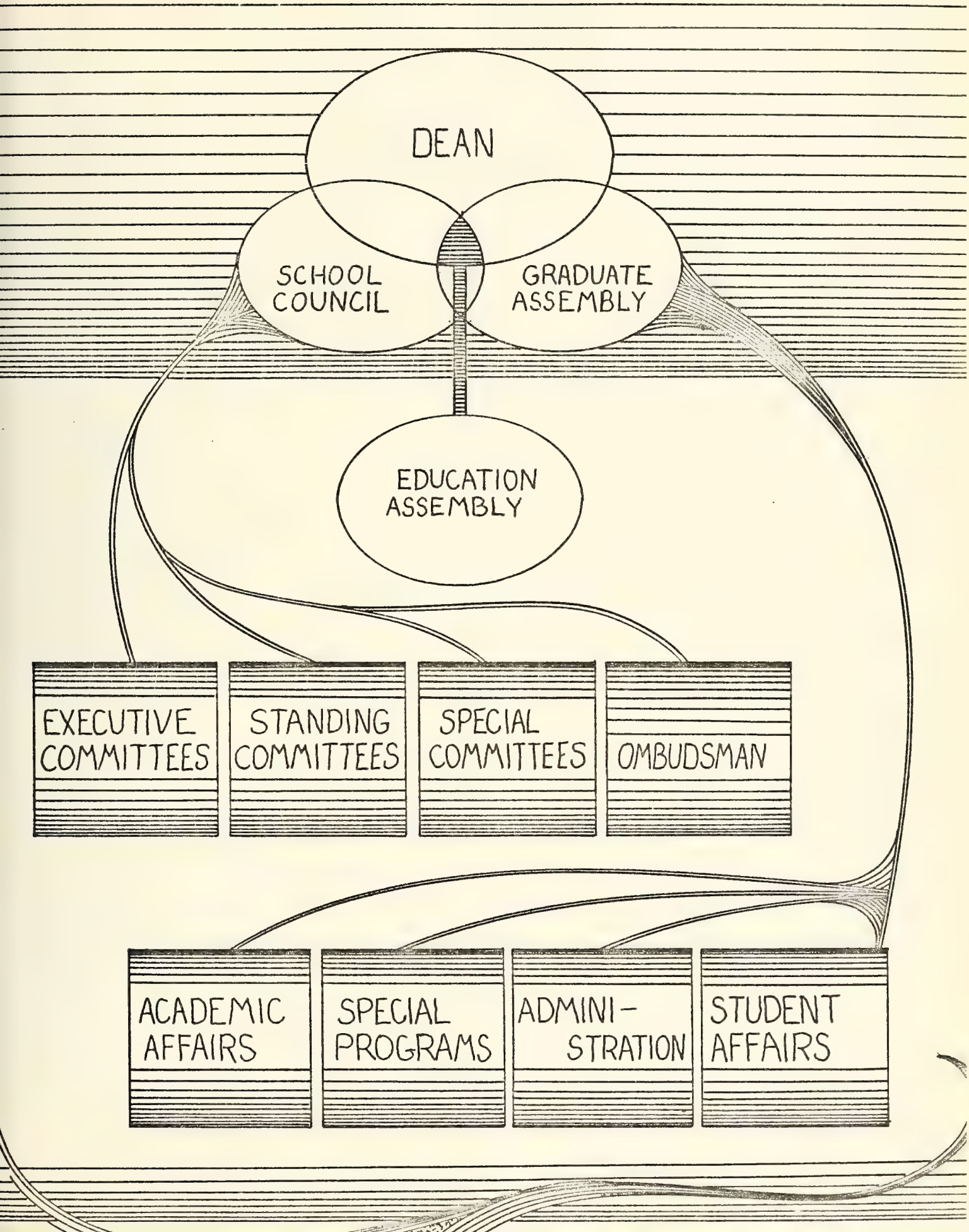
the quality of our existing program, and selectively develop new programs with emphasis on community service integration.

Equipment

New equipment, both functional and educational, is required to support both current and additional faculty needs. It is imperative that, beyond the usual requirements of desks, chairs, bookcases, typewriters, and dictation units, television equipment be provided to enable the micro-teaching component of the teacher education endeavor to function at an acceptable and meaningful level. To do this requires a much larger commitment in the budget than exists at this time.

If the move toward computer-assisted instruction is to be realized, there must be a greater commitment in providing the necessary terminals and related equipment and materials.

It must be recognized that lack of space, faculty and equipment will cause these vital programs to falter, or indeed not become reality at all.


DEAN
SCHOOL COUNCIL
GRADUATE ASSEMBLY
EDUCATION ASSEMBLY
EXECUTIVE COMMITTEES
STANDING COMMITTEES
SPECIAL COMMITTEES
OMBUDSMAN
ACADEMIC AFFAIRS
SPECIAL PROGRAMS
ADMINI-STRATION
STUDENT AFFAIRS

ANNUAL REPORT

SCHOOL OF EDUCATION
UNIVERSITY OF MASSACHUSETTS

1970-1971

Appropriations--Operational Budget

		Actual 1968-69	Actual 1969-70	Original 1970-71	Additional 1970-71
03	Services, Non-Employee	$120,542	$165.459	$265,000	$22,100
10	Travel	11,630	9,000	9,500	4,000
12	Maintenance	952	1,968	2,500	3,000
13	Special Supplies	21,570	13,000	30,000	5,000
14	Office Expense	2,793	3,000	5,000	--
14.1	Telephone	18,002	10,000	10,000	--
14.3	Postage	--	--	4,000	1,500
15	Equipment	34,502	30,000	25,000	10,000
16	Rentals	6,435	10,000	10,000	--
	TOTAL	$216,426	$242,427	$361,000	$45,600

ANNUAL REPORT

SCHOOL OF EDUCATION
UNIVERSITY OF MASSACHUSETTS

Personnel--Professional, Academic

	1968-69	1969-70	1970-71
Dean	1	1	1
Associate Dean			2
Assistant Dean	2	3	2
Professor	7	9	14
Associate Professor	15	18	16
Assistant Professor	16	21	27
Lecturer	7	6	7
Instructor	4	4	
Visiting Lecturer	1	1	
Position Vacancy	1		
TOTAL	54	63	69

Personnel--Professional, Non-Academic

Staff Assistant	1	1	1

Personnel--Non-Professional

Electronic Technicians	2	2	1
Technical Assistant	1	1	2
Technical Specialist			1
Principal Clerk	1	2	2
Senior Clerk and Stenographer	1	2	2
Junior Clerk and Stenographer	8	7	8
Senior Clerk and Typist		1	2
Junior Clerk and Typist	1	3	1
TOTAL	14	18	19

ENROLLMENT STATISTICS

"You have earned the solid support of the student body. You have caught their imaginations and this is good."

Chancellor Oswald Tippo
September, 1970

ANNUAL REPORT

SCHOOL OF EDUCATION
UNIVERSITY OF MASSACHUSETTS

1970-1971

Students or Clientele Served

	1st Semester 1968-69	1st Semester 1969-70	1st Semester 1970-71
Undergraduate Majors	998	1574	1371
Enrollment			
Undergraduates	2101	4489	4904
Graduates	946	1960	2271
Total Enrollment	3047	6449	7175

	2nd Semester 1968-69	2nd Semester 19697-70	2nd Semester 1970-71
Undergraduate Majors			1410
Enrollment			
Undergraduates	4224	6000	6234
Graduates	1656	3264	2205
Total Enrollment	5880	9264	8439

Total Enrollment 1970-71	
1st Semester	7175
2nd Semester	8439
1970-71 Total Enrollment	16614

FUNDED PROJECTS

"I would like to pay tribute to the phenomenal success that you have had in obtaining outside funding. You have made an excellent record here, much better than any established by any other school or college on the campus. And I know that this has meant hard work and lots of travel. You cannot obtain funds of this magnitude by sitting around griping about grievances, real or imagined."

Chancellor Oswald Tippo
September, 1970

PROJECTS - GRANTS - FELLOWSHIPS

Project Name	Account Number	Director	Allotment	Dates
Applied Research	16-68223	Wm. Wolf	$71,400	9/1/69-8/31/71
Applied Research		Wm. Wolf	33,300	9/1/71-8/31/72
Broad Jump, Inc.	11-26050	A. Gentry (C. Abraham)	90,422	6/30/70-6/30/71
CAM-Kettering #642	15-50503	Wm. Gorth	77,500	
Career Opportunities Program-New York	11-26551	R. Phillips (C. Abraham)	92,826	7/1/70-6/30/71 Summer
		A Gentry	97,000	7/1/70-6/30/71
			7,760	Fall
			110,550	7/1/70-6/30/71
			8,844	Spring
Career Opportunities Program-Worcester	11-26550	R. McCoy A. Gentry (C. Abraham)	123,484	7/15/70-6/30/71
Center for the Deaf	20-69200	R. Wyman (Tilley)	203,924	9/1/70-8/31/71
			44,000 adtl.	
			247,924	
Clearinghouse	19-68308	Rick Kean	221,769	5/25/70-5/25/71
Compensatory Ed. Title I	20-68309	J. Fortune	129,876	9/1/70-8/30/71
Cooperative College (School Science)	16-88010	C. Hoagland	29,389	1/7/70-6/30/71
Dev. of Comp.-Teach. Ed. ANISA - model		D. Jordan	175,000	3/5/71-
Differentiated Staffing Institute - E.P.D.A.	16-68226	R. Clark	76,140	6/19/70-6/30/71
Federal City College/DC	15-48300	A. Eve	60,000	3/21/71-
Ford Foundation Administration Leadership	15-56106	D. Flight	198,200	10/1/70-9/30/71
Faculty Res. Q-11-71 (1) Hambleton		R. Hambleton		
Union for Experimental Colleges/Univ.	15-58190	T. Clark	6,500	1st payment Ford
			5,000	" " Antioch

Project Name	Account Number	Director	Allotment	Dates
Ford Foundation Humanistic Education	15-48605	G. Weinstein	182,870	7/1/70-6/30/73
Headstart Leadership	16-69101	J. Young P. Stein	218,870	9/1/70-7/31/71
Innovation Film Fund	11-32501	D. Allen		
Institutional Assistant	19-61906	R. Ulin	26,100	-6/3/71
Kellogg Community College	08-32600	W. Lauroesch	51,400	7/1/70-6/30/71
Mass. Dept. of Ed. - Johnson B	15-47851	R. Johnson	86,445.98	-9/30/71
Mass. Dept. of Ed. Title III, Adult Basic Ed., Evaluation	15-47855	Wm. Wolf M. Rossman	27,500	9/1/70-9/1/71
Mass. Dept. of Youth Svc/ Amherst	15-51430	L. Dye	15,000	4/1/71-6/30/72
Martin Luther King Fellowship	08-32601	E. Seidman	925.	
Media Sp. Hearing	16-68216	R. Wyman	42,563	6/1/70-8/31/71
Mass. Dept. of Ed. - New England Conference	15-51440	R. Johnson		
MESPU	16-69213	R. Clark D. Allen	266,655 Inc. 14,500	-5/1/71
State of New York Evaluation	15-52410	R. Johnson Conroy	220,000	10/1/70-6/30/72
Office of Education	20-68218	G.E. Anderson G. Worle	7,653	1/15/70-11/15/70 Ext: to Aug.'71
Teacher Corps	20-68306	C. Shepard	75,513	1/29/71-6/30/71
Teacher Corps - Sixth Cycle, Preservice	20-68310	W. Tutman	134,400	3/15/71-
Teacher Education Revolution	16-68229	K. Beattie D. Allen	21,492	3/15/71-11/30/71
Teacher Training Seminar Sixth Cycle Seminar	16-68227	J. Cooper	6,000	

SPECIAL AND OFF-CAMPUS PROGRAMS

Commitment to a wide variety of special and off-campus projects continues to be an integral part of the School of Education experience and a major vehicle for achieving the School's goals of reality-based experiential education and educational change.

The Teacher Preparation Program Council has initiated a variety of special programs which undergraduates can choose from to fulfill the major and certification requirements but which embody a variety of alternatives to traditional methods and which rely heavily on internships, pre-practicums, tutorials, field experiences and ex-ternships. The "Off-Campus Teacher Education Program K-12" calls for a semester long off-campus experience in any of a number of identified schools and school districts throughout the U.S., Canada and England. The "Alternative Schools" Program features two on-site internships in urban settings and two 26-day Outward Bound wilderness experiences. The focus of the Urban Education alternative program will be internships combining teaching and living in inner-city communities--Boston, Worcester, Springfield, Philadelphia, Brooklyn, Patterson, New Jersey, Louisville, Kentucky and Los Angeles, California. Other alternative programs initiated by the Teacher Preparation Program Council offer similar off-campus experiences.

During the summer and fall of 1971, many major new projects will be launched in the School of Education. These projects have been substantially funded, will involve undergraduate and graduate students as well as faculty, and will in some way field test an educational innovation in the public sector.

The Center for the Study of Human Potential supported largely by a grant from the New England Regional Commission for the development of a comprehensive teacher education program based on the ANISA Model focuses on the development of learning competence rather than information storage and retrieval. Learning competence and human potential should be defined in terms of cognitive, affective, moral, volitional, perceptual, and psycho-motor capacities and aesthetic sensitivity. Thus the ANISA Model and teacher training based on the model are particularly applicable to problems of compensatory education.

The Staff Development Cooperative consisting of representatives from selected school districts in three New England states was formed during the summer of 1971 in order to prepare for, plan and implement an Integrated Day approach. The program is designed to bridge the usual gap between pre-service and in-service teacher education. A workshop on the Integrated Day approach is planned from July 12-30 at the School of Education and participants will be drawn from cooperating school districts.

The University Without Walls is a funded project of the Union for Experimenting Colleges and Universities which calls for an alternative plan for undergraduate education which can lead to a college degree. A planning group of some seventy-five UMass students and faculty have drawn up a UWW plan which calls for admission of up to 50% for non-university students, a variety of learning resources and options, and

a strong advisory and community component. A pilot UWW program is scheduled to go into operation in the fall of 1971.

The Massachusetts Department of Defense Domestic Action Program represents a coordinated effort to use military facilities for recreation programs for inner-city youth. The program enables 20,000 disadvantaged young people (9-18 years of age) to participate in recreational and educational activities for one to two weeks during the summer and is the result of cooperation between three military bases--Devens, Otis, and Westover--three neighborhood councils, and the University of Massachusetts. Some 300 disadvantaged youth will be employed by the program and it is hoped that this group will form the basis of a year-round leadership identification and education program.

Project J.E.S.I. a cooperative distributive education program will also secure employment for disadvantaged youth--in this case between 100 and 150 high school drop-outs. The youth will fill employment shortages identified by the business community and will be trained in direct reference to the jobs they hold. The program is designed to focus on three areas paramount to the development of human potential--occupation, education and self--and will pilot a workable program that can be adopted by local schools or other concerned agencies.

For the last two years, the School of Education has operated a partial modular credit-modular offering system under which university credits have been subdivided into credit modules, and modules have been offered for a variety of unconventional learning experiences. (The success of the educational marathons--"Alternative Futures in Education" and "Alternative Schooling in an Urban Society" has depended largely

on the modular credit system.) The Carnegie Foundation has funded a project to transform the School of Education to a Completely Modular System by September, 1972. All courses and grades will be replaced by modules thus increasing tremendously the flexibility for both offering and participating in learning experiences.

The National Alternative Schools Project funded by the Office of Education in July, 1971, promises to be one of the most important programs of the School of Education over the next two years and beyond. Under this program, the School will develop both substantive and process models for the planning and implementation of alternative schools in the public sector and the training of personnel for the planning, implementation and staffing of alternative schools. Several alternative school sites will be identified and initiated.

In addition to the "alternative" Teacher Education programs which encourage undergraduates to learn by doing, and new projects scheduled to commence during the summer and fall of 1971, several long term projects continue major programmatic thrusts of the School. The Model Elementary Teacher Education Program in its third year of operation and funded by the Office of Education is an attempt to create and institutionalize a new approach to teacher training which utilizes instructional alternatives and performance criteria in place of more traditional core requirements. The Northeast Regional Media Center for the Deaf has been in existence for six years and is concerned primarily with the improvement of instruction and services to deaf individuals. The Center sponsors workshops, conferences and a yearly media institute for teachers of the deaf in the northeastern United

States, conducts research in the application of educational technology to the education of the deaf, develops materials for use with deaf individuals, and provides consultive services to those interested in improving educational technology for the deaf.

The Teacher Corps Program continues to focus on the integration of Africa into American curriculum. For the past two years it has operated in connection with the Worcester Public Schools but beginning with the sixth cycle will be transferred to the public school system of Providence, Rhode Island. An added dimension to the Providence program integrates METEP components--competency based instructional modules--in the areas of community involvement, urban education and human relations to the introduction of innovative African curriculum.

The Career Opportunities Program is a federally funded program designed to provide an educational career ladder for low income minority group personnel who aspire to positions in the field of professional education. This combination work-study program enables teacher aides and associates in school systems to earn a college education and B.A. while continuing to serve as paraprofessionals in their local school systems. Close to 200 paraprofessionals from Brooklyn, New York and some 45 from Worcester, Massachusetts started with the program in the summer of 1970 and will continue through to their B.A. degrees. Another 45 from the Springfield Public Schools are expected to join the program in the fall of 1971.

The Head Start Leadership Training Program is concerned not only with the head start child and with head start staff but also with helping the whole community improve social services, health and nutrition, parent involvement, career development, individual growth, community attitudes and fostering increased participation

and self-determination at all levels. It is in its third year of operation and trains head start personnel in five week training cycles from throughout the Region I area.

The Clearinghouse for Student Initiated Change funded by the Office of Education for a second year of operation, is a student developed, student operated program which attempts to bring about constructive change in institutions of higher learning (with a focus on New England) through the cooperative efforts of college and university students.

Ford Foundation support for the Executive Leadership Program allows the School to involve a carefully selected group of committed graduate students and faculty in developing courses, modular experiences, structures and advisory procedures aimed at better preparation of educational leaders.

The Ford Foundation also supports the Humanistic Education Center in its program to develop learning experiences and other curricula which would integrate affective learning with cognitive learning and to train teachers and other professionals in humanistic curricula and methods.

In addition to the above mentioned projects which represent a continued commitment of many in the School and substantial funding levels, many no less important projects will be continued during the coming year. The following list includes all active School projects and the person chiefly responsible for that project. The status of projects changes rapidly so there will undoubtedly be many inaccuracies in this list which has been arranged according to centers.

Communications Center - Educational Media and Technology

Northeast Regional Media Center for the Deaf	Ray Wyman
Visual Response System	Ray Wyman
Technology Assessment Program	Ray Wyman
Media Specialists Program	Ray Wyman - Nate Tilley
Summer Media Institutes	Ray Wyman
Que Tal Amigos	Juan Caban
Tribe, Inc.	Nat Rutstein
Lowell Project	Dave Coffing

Educational Research

Development of Three Applied Research Training Programs	Bill Wolf
Data Analysis of 1969-70 Survey of Compensatory Education	Jimmie Fortune
A Validation Study of a Curriculum Planning Model	Ernie Anderson

Center for the Study of Human Potential

Development of a Comprehensive Teacher Education Program based on the ANISA Model	Dan Jordan
Program for Massachusetts Department of Youth Services	Larry Dye
Head Start Leadership Training Program	Peter Stein - Jim Young
SASSI Prep	William Smith

Human Relations

Cooperative Program in Human Systems Administration	Joyce Hinkley
Higher Education: Study and Action Related to Two Year College Development in New England	Bill Lauroesch
Higher Education: Greenfield Community College	Bob Wuerthner
Higher Education Internship Program	Tom Clark
Union for Experimenting Colleges and Universities	Tom Clark
University Without Walls	Tom Clark - Ed Harris

Humanistic Education

A Project for Planning the Organization and Operation of a Center for Humanistic Education	Jerry Weinstein
Mountain View (Los Altos Union High School District)	Jerry Weinstein
Pennsylvania Public Schools	Jerry Weinstein

International Education

Teacher Corps - Providence	Bill Tutman
Exchange Program with the New University of Ulster, Northern Ireland	George Urch
Exchange Program with MacDonald College - McGill University, Montreal	George Urch
Peace Corps International	Dave Schimmel

Innovations in Education

Network of Innovative Schools	Dave Crandall
Montclair Project	Bob Sinclair
West Springfield Project	Bob Sinclair
Internship Program	Joe Beckmann
Committee on Alternative Designs for Reform in Education	Hank Holmes

Leadership and Educational Administration

Administrative Internship Program	Dick Clark
National Association of Independent Schools	Nat French
Urban Staff Development Laboratory - Innovations Team	Art Eve
Washington Innovations Team	Art Eve
Florida State Department of Education - Clinical Professor	Roger Peck
Mitre Corporation	Art Eve
Florida State Department of Education - Differentiated Staffing	Art Eve
Model Cities Resource Center	Art Eve
Outward Bound	John Rhoades Donn Kesselheim
Executive Leadership Program	Dave Flight
Cooperative School Service Center	Nat French

Teacher Education Center

Model Elementary Teacher Education Program	Jim Cooper
Teacher Education Conference	Bill Fanslow
Institute for Training Directors of Teacher Education Reform Programs	Ken Beattie
Staff Development Cooperative to Implement an Integrated Day Approach	Masha Rudman
Differentiated Staffing Institute	Dick Clark
Leadership Training Institute	Dick Clark
Temple City	Bill Fanslow

Urban Education

Domestic Action Program	Rhody McCoy
Boston - Teacher Training	Atron Gentry
Career Opportunities Program - Springfield, Worcester, New York	Atron Gentry
Parkway Project	Atron Gentry

Vocational Technical Education

Leadership Training in Vocational Education	Ray Johnson
Cooperative Distributive Education for Disadvantaged Youth - Project J.E.S.I.	Frank Cyr
Adult Basic Education	Mark Rossman
Massachusetts and New York Evaluation Service Center for Occupational Education	Ray Johnson

Miscellaneous

Leadership Training for Alternative Schools	Bob Mackin
National Alternative Schools Project	Phil DeTurk, Ray Ivey
Completely Modular Curriculum	Phil Christensen
Clearinghouse for Student Initiated Change	Mark Cheren
Cooperative College School Science Program	Carl Hoagland
Thompson Island Immersion Project	TPPC

FACULTY PUBLICATIONS
AND
PROFESSIONAL ACTIVITIES

"...I am tremendously impressed with
the quality of the faculty..."

Chancellor Oswald Tippo
September, 1970

ALLEN, DWIGHT W.

-"Toward a Redefinition of Teacher Education." Educational Technology, (with Robert Mackin) Vol. X, No. 2, pp. 65-70. February 1970.

-"A Dozen Do's for the Seventies," policy paper, Needs of Elementary and Secondary Education for the Seventies, (A Compendium of policy papers compiled by the General Subcommittee on Education of the Committee on Education and Labor, House of Representatives, Ninety-First Congress, pp. 22-29, March 1970.

-"Toward '76: A Revolution in Teacher Education, Phi Delta Kappan, (with Robert Mackin) Vol. LI, No. 9, pp. 485-489. May 1970.

-"It's Easier to Move a Cemetery Than to Change a School, Music Educators Journal, Vol. 57, No. 1, pp. 29-33, September 1970.

-"Organization for Individual Work," (with David E. Day) Learning Centers: Children On Their Own, pp. 26-38, September 1970.

-"Reconstruction of Teacher Education and Professional Growth Programs (or) How the Third Little Pig Escaped the Wolf, (with Glenn W. Hawkes) Phi Delta Kappan, Vol. LII, No. 1, pp. 4 - 14, September 1970.

-"Education and the Suburban Poor," (with William Fanslow), New Models for Public Education, 1970.

-CHAPTER: "A Differentiated Staff: Putting Teaching Talent to Work", in Education ManPower Ed. by James L. Olivero and Edward G. Buffre, Indiana University Press, Chapter 11, pp. 169 - 177, 1970.

-"The Decline of the Textbook", Change Magazine, Vol. 3, No. 1, pp. 37 - 40, Jan. - Feb. 1971.

-"Curriculum for the 80's", The Secondary School Principal in Action, Part 3, Chapter 3, pp. 83 - 85, February 1971.

-"The Seven Deadly Myths of Education," Psychology Today, Vol. 4, No. 10, pp. 70, March 1971.

-"Computer Programs for Test Objectives and Item Banking", Educational and Psychological Measurement, April 1971.

Activities

-American Association for the Advancement of Science
-American Education Research Association
-American Personnel and Guidance Association
-Association for Educational Data Systems
-National Council for the Social Studies
-National Education Association
-Massachusetts Teachers Association
-National Society of College Teachers of Education
-National Society for the Study of Education
-Phi Delta Kappan

ANDERSON, G. ERNEST, JR.

Activities

-Instructor, pre-session of Operations Research in Education, American Educational Research Association, Jan. 30 - Feb. 4, 1971.

-Presented session on Small Simulation Models, Convention of Association for Education Data Systems, April 14, 1971.

-Presented invited seminars on various aspects of our simulation work:
  Harvard Graduate School of Education, Oct. 29, 1970
  Ontario Institute for Studies in Education, Dec. 13, 1970
  University of Pittsburgh (Learning Research and Development Center) May 10, 1971

-Tutorial Sessions in use of simulation models:
  S.P.U. - L.T.I., Oct. 18-21, 1970
  Beaverton, Oregon, Public Schools, Jan. 19-22, 1971

-Appearance at Connecticut Association of School Business Officials Convention for reuse of Data Processing in schools, May 24, 1971.

ANDERSON, NORMA JEAN

-and Kent, Frank "A Message to the Establishment," What Black Educators Are Saying, ed. by Nathan Wright, Jr., Hawthorn Books, Inc., N.Y. 1971, pp. 63 -78.

Activities

-Panel: APGA Convention, Atlantic City, N.J., March 1971.

-Membership: School of Education, University of Massachusetts Committe on Community Admissions.

-Consultant: Amherst Regional H.S., Black Experience Workshop for Teachers, Oct. 1970; Louisville Public Schools, Jan., Feb., 1971; HEW, OCD, Evaluation Team, Providence, R.I., April, 1971; HEW, OCD, Conference, Lynnfield, Mass., May, 1971; State Department of Educational Regional Centers and Model Cities, Conference - "Schools for Whom," Springfield, Mass., May, 1971; Alabama-Cultural Center, UMass., Sept. - June, 1971.

BLANCHARD, KENNETH H.

-"Twenty Years of Consideration and Structure: A Reaction." Discussed and reacted to paper by Edwin A. Fleishman at Southern Illinois Univ. Centenial Event symposium "Contemporary Development in the Study of Leadership" Carbondale, Illinois, April 29, 1971.

-Hersey, Paul and Blanchard, Kenneth, H., "Tri-Dimensional Leader Effectiveness Theory" in Readings and Leadership, U.S. Naval Academy, Dept. of Behavioral Science, 1971.

-Hersey, Paul and Blanchard, Kenneth H. "Cultural Changes: Their Influence on Organizational Structure and Management Behavior," Training and Development Journal, October 1970.

BUNKER, R. MASON

Activities

-Consultant: Plymouth, Mass. Public Schools and Mattapoisett, Mass. Public Schools.

-Workshop participant and leadership: "Clinical Supervision", Miami, Fla. (Dade County). Planning of "Supervision Workshop" (Summer of '71).

-Planner: Fall off-campus Teacher Preparation Program. METEP - Integrated Day Teacher Preparation Program.

-Presentor: "New Directions in In-Service Training of Teachers" (Joint Conference on Teacher Education).

CABAN, JUAN P.

-"A Neglected Educational Area: The Puerto Rican," The Journal, School of Education, Univ. of Mass., Volume 6, Number 3, May 1971, pp. 3 - 5.

Activities

-Panel participation on Puerto Rican Culture, January 6, 1971, at UMass. Presented to a group of 4-H nutritionists working with members of Puerto Rican community in Massachusetts.

-Produced and directed five 30-minute Spanish television programs. The "Que tal, amigos" series was broadcast live over Channel 24 in Hartford, Conn. during the period of Feb. 9 - March 23.

-Participated in Spring '71 Marathon in "Spanish Communications, Its Benefits to the English-Speaking Community," a two-hour program on April 15, '71.

-Spring Graduate Colloquim, UMass April 29, 1971: "Eye Movement Preference as Individual Differences in Learning from Color to Non-Color Pictures."

CAPPELLUZZO, EMMA M.

-Paper presented: American Educational Studies Association, Dallas, Texas, April 5, 1971, "Modularization of the Foundations of Education."

-Monograph: Houghton Mifflin Co. In Press: "The Counselor and the Migrant Child" part of the Guidance Series Monographs, 1971.

Activities

-Panel Participation: Kindergarten Education Conference, Boston, Mass. Fall 1970 State Dept. of Education.

-Discussion leader and speaker: Elementary School District: Shutesbury, New Salem, Wendell, Union 28. "Analysis of Curriculum Guide" March 3, 1971 in Shutesbury,Ma.

-Consultant: "Integration of the Foundations of Education". Invitation: University of Puerto Rico, March 29 - April 2, 1971. "Integration of beginning courses for Medical Personnel" a seminar for Directors of Medical Complex: Puerto Rico, April 1, 1971.

-Off-campus supervision of interns: Ramah, New Mexico - 7 interns at School of Education for 2 weeks involving seminars and evaluation of program, April 12-22, 1971.

-Speaker: Applied Anthropology Seminar: "Education and Anthropology" Anthro. Dept. at UMass. (Tom Fraizer) May 13, 1971.

CLARK, RICHARD

Activities

-Member, Career Opportunities Program, Leadership Training Institute, National Talent Pool.

-University of Mass. representative to the "Seven Year Teacher Education Study" (meeting in St. Louis, Mo., May, 1971).

-Consultant to U.S. Office of Education, January 1971, designing new programs for the public schools and the University of Puerto Rico.

-Consultant to projects Focus and Impact in the Louisville, Kentucky public schools, January 1971.

-Presentation "The Role of Professional Organizations in Differentiated Staffing" October 1970, The SPU National Conference, Colorado.

-Presentation "Effective Team Planning", at Conference of Louisville, KY Public School Staff, January 1971.

-Consultant to or working on cooperative efforts with a variety of school systems including Quincy, Mass., Greece, N.Y., Hanover, N.H., Pittsfield, Mass., and various national SPU project sites.

COFFING, RICHARD

-Young, Stanley, Coffing, Richard T., and Lehan, Michael, "Organizational Programming for the University," Working paper for the President's Committee on the Future of the University, June 1971.

Activities

-Producer, "A Method of Operationalizing a Goal or Intent," self-instructional written and audio materials.

-Panel reactor, Center for Research (SMERD) Colloquium on Evaluating Social Change, April 1971.

CONWAY, WILLIAM J.

Activities

-Project Director: "Teaching Parents Reinforcement Theory and Techniques in a Culturally Disadvantaged Area" in Worcester City Schools, Worcester, MA 70-71.

CONWAY, WILLIAM J. (con't)

-"Parents Use of Behavior Modification to Enhance the Self-Concept of Their Children", Spring Grad. Colloquium, UMass, April 29, 1971.

-Recorder for presentation "Inquiry Role Approach: A Model for Counselor Involvement in Learning", APGA (American Personnel and Guidance Assn) Convention at Atlantic City, NJ, April 6, 1971.

CYR, FREDERICK F. JR.

-Teaching Opportunities for Post-Secondary Graduates (An "Up-Side Down" Program at the Univ. of Mass.), American Vocational Journal, May 1971.

DAMERELL, REGINALD G.

-"The Massachusetts Alternatives" a 4-page newspaper published in the Daily Collegian, April 13, 1971, announcing programs of the Teacher Preparation Programs Council (TPPC).

-White House Conference on Children Stimulation Booklet, U.S. Government Printing Office: 1970.

EVANS, DAVID R.

-"Image or Reality: Career Goals of Educated Ugandan Women" paper presented at the African Studies Asso. Annual Meeting, October 1970.

-"Inspection of a Diversified Educational Program on Career Goals: Tororo Girls School in the Context of Girls Education in Uganda." A research report presented jointly with Gordon Schimmel to U.S. AID and the Ministry of Education Uganda.

-"Decolonialization: Does the Teacher Have a Role?" paper presented at the Comparative Education Society's Annual Meeting.

Activities

-Consultant to Peace Corps for Teacher Education, Kampala, Uganda, July 1970.

-Consultant to CREE/ Univ. of Cali, Cali, Columbia, October 1970.

-Panel participation on Innovation and Excellence in Education at the Univ. of Nigeria, Lagos, Nigeria, May 1971.

-Lecture Tour sponsored by U.S.I.S. to Leshoto, Botswana, Republic of South Africa, and Uganda, June 1971.

FISCHER, LOUIS

-Review Article: Ronald G. Corwin, "Militant Professionalism: A Study of Organizational Conflict in High Schools" (Appleton-Century-Crofts) 397 pp. To appear in Educational Studies, Spring 1971.

-Fischer, Louis, a chapter in Louis Rubin, ed. Inservice Education: New Processes and Procedures, Boston: Allyn and Bacon, 1971.

-Educational Philosophy and Theory, published by Pergamon Press Ltd., London. Univ. of Mass. series in Education.

Activities

-Consultant: several publishing houses and to the Hawaii State Dept. of Education.

-Chairman of General Session, American Educational Studies Assoc., Chicago, Ill, Feb. 24, 1971.

-Chairman, Nominating Committee of the John Dewey Society, 1971.

FORTUNE, JIMMIE C.

-Fortune, Jim C., Berliner, David, and Ungerleider, Charles. "Characteristics of Participants in Title I Programs", Summer 1970.

-Fortune, Jim C., Berliner, David, and Ungerleider, Charles. "Description of Services Offered by Title I Programs and Degrees of Urbanism," Summer 1970.

-Fortune, Jim C., Berliner, David, and Hutchinson, Thomas E. "Analysis of the 1969 Consolidated Program Information Report (CPIR), Volume I, March 1971.

FREDRICKSON, RONALD H.

-Fredrickson, R.H. and Fonda, Thomas, "College Admissions Assistance by Secondary School Counselors," Personnel and Guidance Journal, January 1971, pp. 49, 383-389.

-Fredrickson, R.H. and Vigneault, Leo, Guidance Paraprofessionals: Role and Implications for the School Counselor, Chronicle Guidance Publications, Moravia, N.Y. 1971, 1-8.

Activities

-Chairman of Program at American Personnel and Guidance Assoc. Conference, Atlantic City, N.Y. April 4-8, 1971, entitled Inquiry Role Approach: A Model for Counselor Involvement in Learning.

-Consultant for Mid-Continent Regional Educational Laboratory, Kansas City, Mo., in Development of Inquiry Skills and Affective Component using the computer in language analysis to measure attitude of adolescents in a classroom setting.

FRENCH, NATHANIEL S.

Activities

-Taught a three credit intersession course at the Univ. of Virginia. "Curriculum Revision," Summer 1970.

-Keynote speech to the Alumni Presidents' Council in Albany, N.Y. "The Contribution of Independent Education," October 1970.

-Stockbridge School trustee and member of the Search Committee charged with finding a new headmaster, October 1970.

-Speech addressed to the parents, faculty and students of the Northampton Girls School in Northampton, Mass. "The Importance of Questions in Making Changes," October 1970.

-Spoke on a panel in Philadelphia addressing "One or More of the Important Issues of Education," November 1970.

-Wrote curriculum for combined Williston Academy/ Northampton School for Girls, February 1971.

-Spoke at a public school symposium in Byram Hills, N.Y., "The Soft Revolution," April 1971.

GENTRY, ATRON A.

Activities

-Speech to Worcester administrators and principals about "Education for the Future", Sept. 1970.

-White House Conference of President's Commission on Youth which involved six months of planning and one week in Washington, Fall 1970.

-Panel participant in a discussion of the Hope Factor for Urban Education at the University of Ohio at Athens, Feb. 1971.

-Consultant to N.Y.C. School System on Learning Cooperatives, March 1971.

GENTRY, ATRON A. (con't)

-Consulting with Hartford Equal Education Institute on "Why We Need Integration in Our Schools?" April 7, 1971.

-Consulting at Patterson State College in N.J. April 29, 1971.

-Speech in Worcester to the paraprofessionals working there on "Future of the COP Program" April 30, 1971.

GLENN, HODGES, SR.

-"Predicting Academic Achievement of Special Admit Students" submitted for publication to PDK and AERA.

Activities

-Panel participant in Dallas, Texas at NAEA Conference on"Teacher Education", April 4-9, 1971.

-Presented report on "Status Progress and Focus of UMass Special Educational Opportunity Program," at National Special Services Project Directors Conference, Sept. 1-3, 1970 in New Orleans, La.

-Presentation "CCEBS and Problems of SEOP Programs" at School of Ed. "Marathon" on Nov. 20, 1970.

-Discussion leader, "A Case Study in Special Admissions" at UMass. Faculty Conference on Nov. 11, 1971.

GORTH, WILLIAM P.

-Gorth, W.P., Allen, D.W., Grayson, A. Computer programs for test objective and item banking. Educational and Psychological Measurement, 1971, 31, 245-250.

-Gorth, W.P., (Organizer) Monitoring and managing student outcomes by using new computer technology. A symposium presented at the Annual Meeting of the American Educational Research Association, New York, February 1971.

-Gorth, W.P. (Organizer) Comprehensive Achievement Monitoring (CAM): a project to develop longitudinal classroom evaluation using item sampling. A symposium presented at the Annual Meeting of the National Council of Measurement of Education, New York, February, 1971.

-Gorth, W.P., Allen, D.W. (Leaders) CAM Longitudinal Evaluation for Classroom Management, Curriculum Evaluation and State-Wide Assessment. A workshop presented at the National Educational Technology Conference, N.Y.C., April 1971.

-Gorth, W.P. (Team member) Continuous Achievement Monitoring. A workshop at the 22nd Annual Conference of the N.Y. State Assoc. for Supervision and Curriculum Development, Kiamesha Lake, N.Y., May, 1971.

Activities

-American Educational Research Association

-National Council on Measurement in Education

-American Association for the Advancement of Science

-American Chemical Society

-Educational Research Association of New York State

-National Association for Research in Science Teaching

-Association for Educational Data Systems

HAMBLETON, RONALD K.

-Hambleton, R.K. and Barbuto, P.F. "A Computer Program for Optimal Scaling," Behavioral Science, 1971, In press.

-Hambleton, R.K. A review of the new forms S and T of the Bennett Mechanical

HAMBLETON, RONALD K. (con't)

Comprehension Test. Journal of Educational Measurement, 1971, vol. 8, 55-56.

-Hambleton, R.K., Roberts, D.M., and Traub, R.E. "A Comparison of the Reliability and validity of two methods for assessing partial knowledge on a multiple-choice test. Journal of Educational Measurement, 1970, 7, 75-82.

-Hambleton, R.K. and Traub, R.E. Information curves and efficiency of three logistic test models. Proceedings of the 78th Annual Convention of the American Psychological Association, 1970, 5, 121-122.

-Hambleton, R.K. and Gorth, W. Item analysis for criterion-referenced tests. Paper presented at the Annual Meeting of N.E.R.A., Liberty, N.Y. 1970.

-Hambleton, R.K. and Traub, R.E. Information curves and efficiency of three logistic test models. Paper presented at the Annual Meeting of the American Psychological Association, Miami, 1970.

-O'Reilly, R.P. and Hambleton, R.K. A CMI model for an individualized learning program in ninth grade science. Paper presented at the Annual Meeting of A.E.R.A., New York, 1971.

-O'Reilly, R.P. and Hambleton, R.K. Applied CMI models for groups and individually prescribed instruction in N.Y. State. Paper presented at the Annual Meeting of N.C.M.E., New York, 1971.

-Hambleton, R.K. and Traub, R.E. Some results on the robustness of the Rasch test theory model. Paper presented at the Annual Meeting of A.E.R.A., N.Y. 1971.

-Traub, R.E. and Hambleton, R.K. The effect of instruction upon the semantic space defined by measurement concepts. Paper presented at the Annual Meeting of A.E.R.A., N.Y. 1971.

IVEY, ALLEN

-Ivey, Allen "Attending Behavior: The Basis of Counseling" The School Counselor 18, 117-120.

-Ivey, Allen and Weinstein, G. "The Counselor as a Specialist in Psychological Education" Personnel and Guidance Journal, 49, 98-107.

-Ivey, Allen and Morrill, W. "Confrontation, Communication and Encounter: A Conceptual Framework for Student Development" NASPA: Journal of the National Association of Student Personnel Administrators, 7, 226-234.

-Ivey, Allen and Hurst, J. "Towards a Radicalization of Student Personnel" Journal of College Student Personnel, 12, 165-168.

-Ivey, Allen and Wilson, R. "Perceptions of College Environment: A Four Year Longitudinal Study" Journal of College Student Personnel, 12, 177-178.

-Review of R.R. Carkhuff's "Helping and Human Relations" Personnel and Guidance Journal, 49, 408-411.

Activities

-Editorial board of three journals: Journal of Counseling Psychology, Journal of College Student Personnel, and Journal of the National Association of Student Personnel Administrators.

JONES, BYRD L.

Activities

-Speech in Worcester in December of 1970: "Use of Paraprofessionals in a Differentiated Staff for Urban Elementary Schools."

-Panel participant at the Univ. of Ohio at Athens, "Hope Factor for Urban Education" February 17, 1971.

KESSELHEIM, A. DONN

Activities

-Chairman, Conference on relating Outward Bound to teacher education for Outward Bound administrative personnel, Univ. of Mass., March 10-11, 1971.

-Member of Education Commission, Division of Overseas Ministries and National Council of Churches, New York City, Jan. 18-19, 1971.

-Participant in consultation on long-range plans for Thompson's Island in Boston, April 5-6, 1971.

-Member, representing the Graduate School of Education, Board of Directors associated with Harvard Alumni, Harvard Univ., May 7-8, 1971.

-Convener, third consultation of Tarsus College in Tarsus, Turkey at Leverett, Mass., May 15, 1971.

KORNEGAY, WILLIAM

-Review of Education and State Politics, The Developing Relationship Between Elementary-Secondary and Higher Education by M.D. Usdan, D.W. Minar, and E. Hurwitz, Educational Forum, XXXV (Nov. 1970), pp. 121-122.

MASALSKI, WILLIAM J.

-Presented paper titled "Strategies for Involving Children in Mathematical Exploration" at the Annual Convention of the National Council of Teachers of Mathematics in Anaheim, Cal. on April 17, 1971.

Activities

-Consultant to the Skinner Laboratory School at the Center for Human Development, UMass.

-Kappa Delta Pi

-National Educational Honor Society

-Faculty Counselor

PEELLE, HOWARD A.

-APL/360 U-Programs, H.A. Peelle published by Mid-Hudson CAI Council, (IBM Corp.) Poughkeepsie, N.Y., January 1971.

-Self-instructional materials on introductory APL (A Programming Language) for high school and college faculty and students learning computer programming.

-"Do You Plan to Teach in 1990? -- or -- The Computers are Coming" by H.A. Peelle and T. Martyn, Trend magazine, Spring 1971.

Activities

-Liaison between School of Ed., UMass. and Hampshire College, Sept. - June.

-Panel discussion "CAI: Panic or Panacea?" (Dept. of Computer Science), Oct. 1970.

-World Future Society, presentation of talk on "AI and CAI in the Future" May 1971, Washington, D.C.

REED, HORACE

Activities

-Assisted in preparation of grant proposal to USOE, dealing with the Masters College Project; acted as consultant, July - Aug. 1970.

-Presented paper on "Selection Criteria Research" at Mass. State Colleges and Universities Joint Conference on Teacher Education, March 1971.

-Keynote address at Regional Conference on Non-Western Cultures for Teachers in Massachusetts, March 1971.

KESSELHEIM, A. DONN

Activities

-Chairman, Conference on relating Outward Bound to teacher education for Outward Bound administrative personnel, Univ. of Mass., March 10-11, 1971.

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PEELLE, HOWARD A.

-APL/360 U-Programs, H.A. Peelle published by Mid-Hudson CAI Council, (IBM Corp.) Poughkeepsie, N.Y., January 1971.

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-"Do You Plan to Teach in 1990? -- or -- The Computers are Coming" by H.A. Peelle and T. Martyn, Trend magazine, Spring 1971.

Activities

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REED, HORACE

Activities

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-Presented paper on "Selection Criteria Research" at Mass. State Colleges and Universities Joint Conference on Teacher Education, March 1971.

-Keynote address at Regional Conference on Non-Western Cultures for Teachers in Massachusetts, March 1971.

ROOP, PHYLLIS J.

Activities

-Liaison for University and Amherst School Dept.
-Consultant on special projects to Amherst Schools.

RUTSTEIN, NATHAN

-Booklet: "Dealing with the Television Child: An Educational Crisis" to be distributed to educators throughout the State.

Activities

-Executive Producer of film: Education, S.O.S. for White House Conference on Children.
-Executive Producer of "Que Tal, Amigos/TV", a cultural and educational TV show for Spanish surnamed people, shown in Hartford, Conn.
-Keynote speaker at Mass. Audio Visual Assoc. Spring Conference.
-Spoke to the Mass. Junior Humanities and Science Assoc. on the impact of communications technology on society.
-Communications consultant to Holyoke Free School.
-Member of Advisory Board of Street Academy of Springfield System, Inc.
-Spoke to the Massachusetts Business Teachers Group re: Media Communications in School.
-Spoke to the Holyoke Community College Faculty re: Media Communications in the School.
-Member of Ad Hoc Subcommittee, U.B.C. studying East/West relationships in Massachusetts. Study to be done for President Wood.
-Consultant to Worcester State College President on setting up Media Communications institutes for Education majors.
-Advisor to the Kideo Video Television Program.

SIMON, SIDNEY

-"Relevance and the Kissing Curriculum." The National Elementary Principal, Vol. 50, No. 1, Sept. 1970, pp 40-43. With Merrill Harmin.
-"Sensitizing Modules." Scholastic Teacher. Sept. 21, 1970, pp 28-29 and 42.
-"Nourishing Sexuality in the Schools." National Elementary Principal. Vol. 1, No. 4, Feb. 1971, pp 56-60.
-"Promoting the Search for Values." School Health Review. Vol. 2, No. 1, Feb. 1971, pp 21-24.
-"Values." Chapter 7.9, in The Teachers Handbook. Edited by Dwight W. Allen and Eli Seifman. Scott Foresman, 1971. Pp. 690-698. With M. Harmin.
-"An Alumnus Looks at the Grading Game." Trends. United Presbyterian Church. Vol. 3, No. 1, Sept. 1970, pp. 20-22.
-Wad-ja-get? The Grading Game in American Education. New York, Hart Pub. 1971. With Howard Kirchenbaum and Rodney Napier.

Activities

-Panel member of NBC t.v. show, "Moral Standards of Youth." Channel 4, NYC. May 23, 1971.
-Panel member at annual John Dewey Society Meeting. St. Louis, Mo, March 1971.
-On Editorial Boards of School Review, National Elementary Principal, and Colloquy.

ULIN, RICHARD O.

-"Behavioral Objectives: Vietnam of the English Profession?" The English Leaflet, LXX, 1, pp. 3-10.

WOLF, WILLIAM JR.

Activities

-Advisory Board, Far West Educational R&D Lab., Berkeley, Calif.
-Executive Council, Mass. ABE State Program.
-Executive Council, Mass. ASCD.
-Executive Council, AERA's Special Interest Group on Research Utilization
-Chairman, AERA Publication Committee.
-Member ex officio, AERA Executive Council.

WUERTHNER, ROBERT

Activities

-Project Director of the Greenfield College (Mass.) Univ. of Mass., School of Education, Title III, Grant to improve the faculty advising system at Greenfield Community College.
-Panelist at the New England Junior College Student Personnel Assoc. Spring meeting, April 30, 1971, "The Greenfield Plan--An Innovative Academic Advising Model."

WYMAN, RAYMOND

-"Mediaware Specification Guidelines," Audiovisual Instruction, June-July 1970, pp. 106-109.
-Editor, "An Open Letter to the Manufacturers of Audiovisual Equipment," April 1971, pp. 82-83.

Activities

-Chairman, Technical Standards Commission of Assoc. for Educational Communications and Technology.
-Chairman, American National Standards Committee PH-7.
-Consultant to Syracuse Univ. project to train doctoral media specialists for education of the deaf.
-Chairman, Regional Media Center Directors Council.
-Member of Executive Committee of Special Education, Instructional Media Center Network.
-Member, University Broadcasting Council.
-Consultant, Cybernetics Research Foundation, Washington, D.C.
-Member, Mass. Advisory Council for the Deaf.
-Consultant, Northampton Public Schools, "Sepeech through Vision" project.

YARINGTON, DAVID J.

-"Training Developmental Reading Teachers: A Proposal," Reading Horizons, Western Michigan Univ., July 1970.
-"A Review of Research Literature Dealing with High School and College Students' Time Spent Reading and Studying," The Journal of the Reading Specialist, V. 10, No. 2, December 1970, pp. 96-107.
-"Change and the Reading Establishment," Midwest Education Review, Vol. 3, No. 2, Winter 1971, pp. 37-45.
-"The Reading Establishment," paper presented at Jersey City State College Reading Workshop, July 15, 1970.

Activities

-Chairman of Professional Standards and Ethics Committee of the International Reading Assoc., May 1971.

DOCTORAL CANDIDATES

PUBLICATIONS AND PROFESSIONAL ACTIVITIES

ALEXANDER, PAULETTE

Activities

-Gave Marathon talk on "Preventing Discipline Problems in the Primary Grades"

ALLEN, RICHARD

Activities

-Introduction to American Government - programmed instructional course for high school drop outs. Produced for Marcan Corporation.

-American History Through the Reconstruction - programmed instructional course for high school drop outs. Produced for Marcan Corporation.

-American History Following the Reconstruction - programmed instructional course for high school drop outs. Produced for Marcan Corporation.

-Teaching Operationalizing (Breakdown) of a Goal or Intent into Its Basic Components - programmed module of instruction for teachers and administrators. Produced for use in Teacher Corps Seminars.

-The Analysis and Use of Programmed Instruction - programmed multi media workshop for supervisors and administrators. Produced for the education division of the Scott Paper Company.

-Writing of Behavioral Objectives - presentations given for selected personnel in the Nipmuc Regional School District.

-Use of Comprehensive Achievement Monitoring (CAM) - a series of workshops and follow-up activities to institute CAM in the Newington, Connecticut School District.

BING, JOHN

Activities

-Consultant to University of Texas, El Paso; Adams State College, Alamosa, Colorado; New Mexico State University, Las Cruces, N.M.; for Teacher Corps.

BOFFEY, BARNES

Activities

-Consultant - Title II - Pupil Transfer Program - New Bedford, Mass.

CANFIELD, JOHN T.

-Editor, Edvance: A Newsletter on Affective and Humanistic Education, Chicago: Combined Motivation Education Systems, 1970-1971 (five issues).

-with Lacy Hall, "If Life Hands You a Lemon, Squeeze It and Make Lemonade," Journal of the Boys Clubs of America, Fall, 1970.

-with Lacy Hall, "A Feeling of I-Canness," Journal of the Boys Clubs of America, Winter, 1970-71. Reprinted in Edvance, Vol. I, no. 2, February, 1971.

-with Harold Wells, About Me: A Curriculum for a Developing Self. Chicago: Combined Motivation Education Systems, 1971.

-with Lacy Hall and Harold Wells, 100 Ways to Enhance Self-Concept. Chicago: Combined Motivation Education Systems, 1971.

-with Doris Shallcross and Mark Phillips, Toward a Guide to Humanistic Education. Chicago: Combined Motivation Education Systems, 1971.

-with John Carroll, Readings for Black Americans: A Methodology and Annotated Bibliography on the Use of Paperback Books for the Classroom. Baltimore: Class International Press, 1971.

CANFIELD, (con't)

Activities

-with Sidney B. Simon and Marianne Simon, "Teaching and Learning in the Affective Domain: Exercises Designed to Recognize and Deal with Value Conflicts," Action Laboratory 28, Annual Conference, Association for Supervision and Curriculum Development, St. Louis, Missouri, March 6-9, 1971.

-"Toward Humanistic Education: A Curriculum of Affect," New Horizons, A National Conference on Affective Education, Chicago, Illinois, May 4, 1971.

-with Gerald Weinstein and Sidney B. Simon, "An Introduction to Humanistic Education," New England Center for Personal and Organizational Development, Amherst, Mass., April 9-11, 1971.

-"TORI Community Workshop," New England Center for Personal and Organizational Development, Amherst, Mass., February 12-14, 1971.

CARTER, DORIS, M.

-"Visual Conservation", in Environmental Education, Winter, 1970, Demar Educ. Research, Madison, Wisconsin.

CHRISTENSEN, PHILIP R.

Activities

-Planner, 1st National Conference on Differentiated Staffing (developing instructional programs).

-Consultant to Forum 8, "Confronting the Myths of Education," White House Conference on Children (developing simulations).

-Workshop chairman, School of Education's Summer Workshop on educational innovations (workshop on modular credit and portfolio systems).

-Consultant to Springfield Technical Community College (modular credit).

-Workshop Co-Chairman (with Dwight Allen), 1st National Educational Technology Conference (workshop on modular credit and portfolio systems).

CROMACK, THEODORE R.

-Cromack, Theodore R. and Duane E. Cromack. "Two Factors in Student Ratings of Teachers," Paper presented at New England Educational Research Organization, June 3, 1971.

-Cromack, Theodore R. "Identification of Elements of Bias in Teacher Ratings," Paper presented at New England Educational Research Organization, June 3, 1971.

DEDE, CHRISTOPHER J.

-Dede, Christopher J., "Pressure Dependence of Carbon Trioxide Formation in the Gas Phase Reaction of O (^{1}D) with Carbon Dioxide," J. Phys. Chem. 74: 2621-25 (1970).

-Dede, Christopher J., "The Importance of Futuristics for Teachers," Trend, Co-operative Schools Service Center, April, 1971.

-Dede, Christopher J., "The Role of Futuristics in Education," Select Paper of the World Future Society, June, 1971.

DEDE, (con't)

Activities

-Presentation on "Futuristics in Elementary and Secondary Schools" at the First General Assembly of the World Future Society, (May, 1971).

-One of seventy participants in the American Chemical Society International Conference on Chemical Education. (July, 1970). Member of the panel on "Chemistry for Citizens."

KAUFMAN, BARRY A.

-Kaufman, Barry A. "Psychological Implications of Discovery Learning in Science". Science Education, 55(1): 73-83, 1971.

-Kaufman, Barry A. "A Cooperative Program in Natural History for Preservice Elementary Teachers". Annual National Proceedings of the National Science Teachers Association, April, 1971.

LEPARD, DAVID

-"Fostering Learning Through Arts." The Alumnus, Volume II, Number 1, University of Massachusetts, Amherst, Massachusetts, February/March 1971, pp. 18-19.

LITTLE, WARREN M.

-Little, Warren M., "Environmental Education: Something Old and Something New," The Independent School Bulletin, May, 1971, pp. 8-11.

Activities

-Member, Environmental Education Advisory Committee for the New England School Development Council (NESDEC).

-Consultant in Environmental Education, Wellesley Public Schools.

-Conducted a twelve session course for environmental aides in Wellesley.

-Attended USOE sponsored New England Environmental Education Conference April 30-May 2, 1971, Block Island, Rhode Island. Moderated sessions on "Teacher Aides in Environmental Education," and "Developing Environmental Education Workshops.

-Presented a talk on "The Status of Environmental Education in Massachusetts" to the Massachusetts Conservation Council, May 19, 1971.

-Conducted a series of workshops in environmental education for Northeastern University's Boston Bouve School of Physical Education.

LOVE, PRENTISS M.

-"The Division of General Studies Offers Counseling Services to Freshman and Sophomore Students of Grambling College," Louisiana Education Association Journal, December, 1970, pp. 23-24.

MACKNIGHT, CAROL B.

-MacKnight, C.B. & Young, J.E., Patterns in Sound. Elizabeth, Pa., Continental Press, 1971.

Activities

-"The Development and Evaluation of Total Pattern Instruction in Music Reading for Beginning Instrumentalists," Paper presented at the Eastern Division MENC Conference in Atlantic City, New Jersey, February 28, 1971.

MACKNIGHT, (con't)

-Panelist, I was a panelist reporting on the Research Training Institute II at the Massachusetts Music Educators All-State Conference in Chicopee, Massachusetts, April 1, 1971.

MANN, NATHANIEL

-"A Discovery Lesson on Matrix Inverses," Mathematics Teacher, LXIV, #4, April 1971, pp. 323-324.

MILENSKI, PAUL E.

Activities

-Participant & Consultant; Mt. Wachusett Jr. College, Eng. Teachers Conference, Gardner, Mass., March-April '71.

-Consultant, Language Arts Curriculum, South Hadley Intermediate School, South Hadley, Mass.

PROPER, ELIZABETH C.

Activities

-Panel, Research on Teacher Effects, Proper, Elizabeth C., Reactor New England Educational Research Organization Annual Conference, June 3, 1971.

-Paper presentation, Review of Problems of Testing for Homogeneity Prior to Running an ANOVA, Proper, Elizabeth C. New England Research Organization, June 4, 1971.

ROBERTS, PETER R.

Activities

-Principal Speaker, 3rd. Annual Conference on Early Childhood, Salem State College. Paper: Infants in the Integrated Day.

-Keynote Speaker, Greater Boston Regional Conference on Kindergarten Programs, Horace Mann School, Newton. Paper: Open School Models for Kindergarten.

-Speaker, 4C's Annual Conference, Salem State College. Paper: Day Care and the Integrated Day.

-Keynote Speaker, Massachusetts State Dept. of Education Early Childhood Workshop, North Andover, Mass. Paper: British Infant Schools.

-Speaker, Mass. State Department of Education. Early Childhood Workshop, Wareham, Mass. Paper: The Integrated Day.

-Speaker, Mass. State Department of Education. Early Childhood Conference Worcester, Mass. Paper: Open Schooling.

SCHRIBER, PETER E.

Activities

-Schriber, Peter E. "Cost Benefit Analysis of Comprehensive Achievement Monitoring for Classroom Evaluation." Paper presented at the Annual Meeting of the National Council of Measurement of Education, New York, February, 1971.

-Schriber, Peter E. and Gorth, William P. "Objective and Item Banking Computer Software and Its Use in Comprehensive Achivement Monitoring." Paper presented at the Annual Meeting of the American Educational Research Association, New York, February, 1971.

-Schriber, Peter E. Resource person (i.e., a presenter) in the workshop, "Comprehensive Achivement Monitoring: Longitudinal Evaluation for Classroom Management, Curriculum Evaluation and State-Wide Assessment." Workshop presented at the Annual National Educational Technology Conference, New York, April, 1971.

SCHALLCROSS, DORIS J.

-Shallcross, Doris J. "Developing Creative Potential Through a Course in Creative Problem Solving." THE BULLETIN of the National Association of Secondary School Principals; Idea Forum: IX No. 353, March 1971.

TIPPO, DENIS

-Tippo, Denis R. "Organization of Higher Education in Massachusetts." A Working paper for the Study Committee on the Organization of Higher Education. Massachusetts Board of Higher Education; Document No. 5334, August, 1970.

Activities

-Nominated to Eastern Regional Council of the American Association for Higher Education, 1971-1972.

TOWEY, CARROLL F.

Activities

-"Conceptualizing Adult Basic Education in Correctional Settings." Regional Training Seminars on Adult Basic Education Correction at Columbia University; Honolulu: Educational Research and Development Center, University of Hawaii, April 1, 1971.

CENTERS

"I urge that you make sure that a proper share of the teaching manpower and resources be allocated to the teacher-training parts of the program, in other words, practice teaching, supervision of teaching and so forth, rather than to some of the more peripheral, glamorous enterprises."

Chancellor Oswald Tippo
September, 1970

CENTER FOR THE STUDY OF AESTHETICS IN EDUCATION

The major accomplishments of the Center include: the appointment of Dr. Roland Wiggins as Center Director; the addition of one new faculty member to the Center, William Andres; the development, organization and evaluation of a major innovative multi-arts undergraduate teacher education course, The Aesthetic Elements of the Teaching-Learning Process, made possible by the cooperation and dedication of six unfunded graduate students from the Center; a rededication to the needs of the urban crisis and a committment to seeking solutions to the challenging issue: racism in society and education; and, the graduation of our first two doctoral students since the "revolution".

Special projects and programs have included: Center participation in Headstart and Broadjump teacher training programs; hosting and sponsoring a Manhattanville Music Curriculum Program workshop (completing a series of direct involvement efforts in all major music education innovations in the nation); coordinating the Hallmark "Kaleidoscope" art-experience program for school children in Amherst; conduction a special elementary education arts program entitled "Lollypop"; representation at the Institute of Black American Music held in Chicago and at various other national arts, research and environmental conferences; and publication of articles in the School of Education Journal and publication of "Fostering Learning Through the Arts" in the University of Massachusetts Alumni magazine.

CENTER FOR FOUNDATIONS OF EDUCATION
(Sociological, Historical, Philosophical)

The Foundations of Education Center is composed of 13 graduate students (doctoral), two Master's degree students and seven full-time faculty members. This year we have been fortunate to have two part-time faculty from other Centers in the School of Education. The

bulk of energies for the past year have been directed to:

a. providing instruction and personnel to meet the needs of the undergraduate population. All faculty and funded graduate students assisted in this effort.

b. teaching the Foundations of Education to student enrolled in the Career Opportunity Program in Brooklyn, New York. This was a total Center effort with coordination and cooperation with the Center for Urban Education. The program was unique for our Center in that it involved traveling weekly to New York to teach on site and to meet the needs of paraprofessionals who are seeking advanced work in education.

c. developing over the year, in cooperation with the Anthropology Department, a Master of Arts in Education and Anthropology. One of the Foundations faculty is Director of this new program and works with a cross-campus committee of two faculty from Anthropology and two faculty from Education. The MAT program is designed to prepare teachers for the public schools and community colleges.

d. the development of a Foundations of Education Teacher Education Model for the Teacher Preparation Program for the School to be initiated this fall. The thrust of the program is in the direction of strong combination of theory and practice for undergraduates in education. All staff are involved in executing this program.

e. providing a design for alternatives in Foundations of Education by offering a variety of course experiences as well as offering doctoral candidates an opportunity for supervised and evaluated teaching at the university level. Special seminars and supervisory activities will become part of the 251-Foundations/Graduate Fellows experience. This program will be initiated this fall and will involve six graduate students and a full-time faculty member.

f. continued cooperation and volunteer services with various projects in the School of Education which include:

    1. USOE Research Training Program (Research)

    2. COP (Urban Education)

    3. Teacher Corps (International Education)

    4. Off-Campus Internship Program (Teacher Education)

Center faculty have cooperated with the State Department of Education in presentation, seminars, workshops in the dissemination of information concerning Kindergarten Education in the State of Massachusetts. Additionally, Center faculty have participated in important University and School of Education committees and functions: Faculty Senate, Committee on Scholarships, Study Abroad, Personnel Committee, Academic Matters Committee, School Council, University Tenure and Grievance Committee, and Residential Colleges. Faculty members are also participating in a new Teacher Corps Project which is compentency based and will be operative in the fall.

The major accomplishment of the Foundations Center may well be the contribution it makes to undergraduate teacher education and the preparation of outstanding graduate students for University teaching. The initiation of a teacher education program, the off-campus involvement and the many varied activities of the professional staff this past year indicate a redoubling of efforts to seek and serve various facets of the University, School of Education and off-campus communities.

CENTER FOR THE STUDY OF HUMAN POTENTIAL

The Center for the Study of Human Potential came into being in the Spring of 1971. It evolved from a number of programs already in existence: Early Childhood Education, Compensatory Education, Prison Education and Education for Juvenile Delinquency Prevention. In addition to full loads of teaching, advising, and supervising the dissertation activities of a number of doctoral candidates, the Center, under the leadership of Mr. Larry Dye, received a grant (of $25,000) from the U. S. Office of Education for the purpose of making an assessment of the Juvenile Delinquency Prevention and Control Act of 1968. A conference was organized on campus to which participants from all over the country were invited. Special papers, generally directed at the problems of juvenile delinquency prevention and control,

were presented at the conference and were later developed into an edited volume of conference papers which were submitted to the U. S. Office of Education along with an assessment of the Act under consideration. The Center has also recently received a $175,000 grant from the New England Program in Teacher Education for the purpose of developing the specifications of an educational model (ANISA) designed to develop human potential at an optimum rate by concentrating on the development of learning competence. The grant also covers the cost of detailing a teacher education program based on the model. The new director of the Center is Dr. Daniel Jordan.

In addition to those listed above, the Center has been involved in helping to develop programs in day care centers in Northampton and Easthampton and in a number of juvenile detention homes in Massachusetts. The Center has also provided consultant services to a number of State Departments of Education, to Title I ESEA programs in the New England region, the State Division of Youth Services, and a number of correctional institutions in the New England region.

CENTER FOR HUMAN RELATIONS

The Center for Human Relations came into being through the cooperative merger of Counselor Education and Higher Education, based on an umbrella concept which includes: intra/inter-personal dynamics; small group dynamics; and organizational/community dynamics. The major focus is on change, whether it be individual or organizational. One of the major accomplishments of the year has been the development of this umbrella so that all students and faculty are involved in trying to promote this concept as the basis for the education of change agents, school and college counselors, or applied behavioral scientists.

The Center has moved in the course of the year from a relatively disconnected group of individuals with little common understanding of our own goals to a relatively cohesive group of students and faculty

who are excited about a number of special projects and working collaboratively on a number of activities that have become part of the regular program, as well as having been engaged in extensive work on published materials.

I. Masters Program - The Masters Program served over two dozen full-time and several part-time students who continued to design their own programs according to their personal interests and professional purposes. In addition to our Center courses, they also found meaningful offerings in centers such as Humanistic, Leadership and Administration, as well as in other University Departments, particularly Psychology and Human Development. Although most students continue to prepare for school counseling positions, an increasing number are preparing for counseling and community development work in higher education, community agencies, and growth centers. This trend also reflects the new directions and concerns of the Center as a whole as we try to anticipate the social problems of the future and generate more effective ways to meet them.

II. Doctoral Program - This program consumes a major part of the time and energy of the faculty in activities which range from initial orientation and advising to working with dissertations and research projects. There are approximately 50 doctoral students in Human Relations/Counseling and approximately 30 with a major focus in the Higher Education program.

III. Practicum - This year over 40 practicum students were placed in a variety of settings including public schools, institutions of higher education, community mental health clinics, the V. A. Psychiatric Hospital, CEEBS, half-way houses and Upward Bound. Fourteen different faculty and students served as advisors. An increasing number of practicum students are aiming at university or community mental health settings. This year we have made a concerted effort to work closely with CDHR and respond to the need for

Residence Hall Counseling and to the changing needs of the people and communities we serve. In conjunction with this we have offered a year-long seminar (no credit) concentrating on elementary education counseling.

IV. Admissions - The processes and decisions became more complex this year as the reputation of the School and the Center drew more richly qualified applicants. The interviewing and processing became part of the overload we share, and the net result is an even more highly qualified, experienced and resourceful group of students. Out of more than 500 applicants, we have selected approximately 30 students (with backgrounds in a variety of change-oriented activities) and anticipate that they will make significant contributions to continued innovations in the School.

V. Resource Center - The Center, in response to TPPC's undergraduate program, has proposed and is developing a Human Relations Resource Center which will generate and coordinate a variety of modular credit offerings for undergraduate teaching majors in the School of Education. These modular offerings will include such things as: The Teacher as Change Agent, The Teacher as Counselor, White Racism, Human Interaction Labs, Organizational Dynamics, Human Relations in the Classroom, etc. Graduate assistants will coordinate this effort with the support of all Center staff and students.

VI. Higher Education - The first Higher Education Seminar Series was presented May 3-14, utilizing resources from within and outside the University, to present a number of topics and issues relevant to Higher Ed. Approximately 300 people attended. A preliminary process for the establishment of an internship program for doctoral students in Higher Education has been negotiated. Members of the Program also made significant contributions to several experimental programs currently in the design or implementation stages on the campus. These include the design and teaching of experimental courses in "Living-Learning Experiments" -- Butterfield,

Greenough, Project 10, George Washington Lower, John Adams, Orchard Hill -- and the development of an experimental curricular program, The University Without Walls (U.W.W.).

VII. Special Projects - (1) UWW - Under the auspices of the Union for Experimenting Colleges and Universities (funded by U.S.O.E. and Ford Foundation) UMass, as one of 20 component members, has planned and developed a program that will admit 30 undergraduates in the Fall of 1971, who will work toward a UMass/UWW degree, negotiating distribution requirements through utilizing self-directed campus (on and off) work and study, internships, apprenticeships and travel. The program has been staffed by faculty and graduate students from the Human Relations Center, which next year will include two faculty from the School of Education and the remaining six from other schools and departments to make this a university-wide experimental project. (2) Assault on Racism - As a result of the Nantucket Manifesto, the Center met and designed a Human Relations program which will search out and eliminate attitudes and behaviors which perpetuate institutional racism in schools. (3) Albany Project - To develop a cooperative doctoral program in Human Systems Administration, the N.Y. School of Psychiatry funded two graduate fellowships in the Center. The program will begin in September of 1971 with a total of 16 students from the Human Relations Center and from the N.Y. institutions, with the goal of training administrators who will be generalists able to function in a variety of institutions providing human services. (4) Worcester Project - was designed to teach culturally disadvantaged parents how to enhance the self-concept of their children, using reinforcement theory, and video-taped to be used in the future as a training film.

Other Center activities included programs of the Center for Community College Affairs (Curriculum and In-Service Staff Development Programs, Workshops of the New England Student Personnel Association, and the Greenfield Plan: Title III grant for the purpose of improving

the faculty advising system at Greenfield Community College, staffed by one faculty member and two graduate assistants); Elations - a weekly newsletter for all Center staff and students that has been beneficial in helping the Center achieve cohesiveness. The Center participated in Fall and Spring Marathons; Convention Programs of the APGA, ACPA, APA, AAHE; Human Relations Labs (i.e., Vocational Education and Training of Para-professionals). The Center (faculty and students) have been involved in helping organize, staff and run Room To Move, UMass Drug Drop-In Center to provide information and medical-psychological services to all UMass students in need of help. We have offered a series of courses with the Continuing Education Department and a number of people have consulted with school systems and government agencies. We have also had numerous associations: NTL, worked collaboratively with agencies in the University community including residence hall areas, University Counseling Center, Community Development and Human Relations office in Student Affairs. Generally, we have begun and will continue to develop more clearly a Human Relations Concept of individual group and community dynamics.

CENTER FOR HUMANISTIC EDUCATION

During 1970-71, the Center for Humanistic Education has begun the important job of developing and implementing humanistic education curriculum in various pilot schools throughout the country. Most of the schools involved have been in the New England area, although we do have a number of schools in California, and Philadelphia who are taking advantage of the services we have to offer. Such services that we offer are: staff development in the areas of curriculum development and the acquisition of personalogical skills. The Center has grown tremendously over the past year from a unit of approximately 20 people, to a unit of over 50. As a result, we see that our influence is being felt in many quarters of the educational community. The amount and quality of our curriculum

efforts has greatly increased and improved, and we now feel confident to continue with the successful and effective implementation of humanistic curriculum into public schools. A noteworthy accomplishment is the service that we have been able to render to the School of Education and university community through our courses. We seem to have been able to aid students and faculty members in furthering their personal development and professional expertise. Strength Training, Value Clarification, Education of the Self have afforded many people their first opportunity to begin to look at themselves as decision-makers and teachers.

Special projects: In the past year our off-campus special programs for teachers have proven to be significantly successful in bringing the affective domain into legitimacy in the classroom and the schools. The programs in which we are involved are the humanistic education program in Montague, Quabbin School District, Philadelphia School District, the humanistic education program now operating in Warwick, Massachusetts, the humanistic education nursing program in Springfield, Massachusetts, the COP program in Brooklyn, New York, the program in the Dorchester, Massachusetts schools and in Mt. View, California. Throughout all of these it is easy to see the improvement and progress we have made with our dealings with these communities, and the improvement in classroom instruction which is our major goal.

CENTER FOR LEADERSHIP AND ADMINISTRATION

Major accomplishments of CLA have been the refinement and extension of previous plans, development and pilot-testing of program components in the following areas:

a. Learning Groups - Beginning in September, 1971, all resident and part-time students affiliated with CLA will participate in the activities of an 8-10 member faculty and student learning group. Investing the equivalent of a 3-credit course in time and effort, each group will address diagnosis

and evaluation functions for its members, individual and group agenda building, and clinical or field oriented problem solving. Within these tasks, the integration of theory and practice will be a major objective.

b. Modular Credit Offerings - CLA faculty and graduate students will embark upon an extensive mod credit offering, the equivalent of a 3-credit course commitment for each faculty member (45 modules at 15 per semester hour) to both graduate and undergraduate students. The Center will assume responsibility for planning, monitoring, and evaluating learning experiences under this rubric, and will provide guidance services in connection with the offerings for undergrads (learning groups will be the source of such guidance at the graduate level). A prominent feature of this program component will be the provision of specific offerings in response to identified needs of graduate learning-groups and subsets of the undergraduate population to be served.

c. School Service - Expectations and plans for a significant contribution by each graduate student in the area of professional service have been generated on a systematic and comprehensive basis for implementation next fall. Some activities in this category will be undertaken by learning-groups, while other tasks will be borne by individuals and small groups. Everyone will have some involvement in: providing administrative help to a variety of School of Education centers and programs, advising and counseling undergraduate and new graduate students, teaching courses and facilitating the task performance of section groups in the Introduction to Educational Administration, providing consultant and advisory services to school systems throughout Western Massachusetts, writing and editing publications and proposals, undertaking field studies and action research projects in the field, etc.

d. Personnel Resources - In addition to the regular course and modular offerings of Center, faculty and graduate students, CLA will sponsor a continuing series of guest appearances by a wide range of resource people within and outside the five-college community. Presentations will be scheduled on a "one-shot" basis, but with increasing frequency will involve a series of seminar-like interactions over a period of several weeks or months. In this fashion, supplementary substantive contributions will be afforded CLA students and faculty from a broad spectrum of disciplines and special areas: social sciences, humanities, business and industrial enterprises, and the like.

e. Internships - A re-examination of the clinical experience in the preparation of educational leaders has lead to a new, evolving definition which will be operationalized and implemented next year. Everyone will be expected to participate in a variety of activities within field settings: one month to semester-long problem-solving tasks in schools, school-related, and non-school organizations; shadowing or observational experiences for shorter lengths of time in a wide variety of organizational contexts, sustained administrative applications within the School of Education and the University at large, etc.

f. Attack on Institutional Racism - CLA has made a major commitment to translate into programmatic, operational terms a broad-based attack on the dual society which schools and other institutions perpetuate through expressions of overt and covert racism. This commitment has been reflected in the recruitment and selection of students for next fall, in the introduction of special units within traditional course offerings, in the establishment of internship and field service experiences in locations where service to minority groups is the basic task, and in introspective examiniations of its own practices and behaviors.

Special projects of CLA are:

a. CSSC - The Co-operative School Service Center has been affiliated with the Center for Leadership and Administration for some years. Under the executive directorship of Nat French, CSSC provides consulting and administrative services to member school systems throughout Western Massachusetts, publishes a newsletter and periodical which is circulated to members and beyond, and coordinates intern-type activities for graduate students within CSSC schools.

b. Executive Leadership Program - The Ford Foundation has provided funding for a second year to support graduate students, faculty time, and limited support services for an innovative program in the preparation of educational leaders. ELP parallels closely the emerging Center program described above. Ten to twelve students will be continuing in the second or third years of their ELP participation next fall, while fifteen beginning doctoral students will become involved in September.

CENTER FOR INTERNATIONAL EDUCATION

The major accomplishments of the Center for International Education this year fall into three categories: publications, appointments, and funded projects.

Publications:

a. The Non-Western World: An Annotated Bibliography for Elementary and Secondary Schools. This publication, prepared by Dr. George Urch and Ruth Probandt, contains more than 350 annotated entries of books and documents useful to teachers of non-Western studies for the areas of Africa, Asia, and Latin America.

b. Sundry Papers. This publication is a collection of five papers written under the supervision of Professor David R. Evans. They are titled "Uses of Foreign Students" by Steven Grant, "Micro-Teaching in a Cross-Cultural Training Situation" by Alfred S. Hartwell and Joseph Blackman, "St. Lucia and Martinique: A Sketch of Economic Development in Two Caribbean Islands" by Francis Higginson, "Pre-Occupation and In-Industry Education" by James Hoxeng, and "A Brief History of Attempts to Bring the Study of Man to Man: Anthropology and Education and the Use of Film in Anthropology" by Kenneth Shuey.

c. The Impact of a Diversified Educational Program on Career Goals: Tororo Girls' School in the Context of Girls' Education in Uganda. This publication written by Professor David R. Evans and Gordon Schimmel is the final report of a research project conducted in Tororo. It is a comparative study of five girls' secondary schools in Uganda.

d. Non-Formal Alternatives to Schooling: A Glossary of Educational Methods. This publication, compiled by David R. Evans and William Smith, is an introductory document describing some twenty-five alternatives to schooling - alternatives which are now described as non-formal teaching methods.

e. Education Innovations: Issues in Adaptation. Compiled by Professor David R. Evans, Arthur Gillette and William Smith, this document is a collection of innovative techniques and serves as an introductory reference.

f. Publications by Arthur Gillette, fellow of the Center, include: "Something of Value to Share", an article in the Christian Science Monitor which gives a description of the CIE Teacher Corps Project in Worcester; "Pour les Echanges Intraregionaov a l'Interieur de Tiers Mande" (For Intraregional Exchanges in the Third World), an article written for Education et Echanges, Paris, which advocated the development of youth exchanges within Asia, Africa, and Latin America; and, "Les Conference, a quoi ga sest?" (What Use Conferences?), an article written for Education et Echanges, Paris, which attacks the traditional conferences and proposes alternatives.

g. African Studies Handbook. This publication, by Marianne Nesler, represents the final product of the Worcester Teacher Corps and is a compilation of various African Studies curricula for both elementary and secondary schools.

Appointments: During the year several CIE Fellows received faculty appointments and research grants. Cynthia Shepard became Director of the Center for International Development Studies, Texas Southern University of Houston and Hank Homes was appointed to the position of Cross-Cultural Coordinator for the U. S. Peace Corps in Malaysia. Joseph Blackman and Dale Kinsley became faculty members of the University of California of Santa Cruz where they will direct a three-year combination Teacher Corps/Peace Corps Program. Steve Grant has been doing field research on the Educational TV Project in the Ivory Coast.

Funded projects:

a. Teacher Corps. During 1971, the 4th Cycle Teacher Corps Program was extended for six months in what is termed "the extern phase". The six Teacher Corps teams were split between the cities of Worcester, Massachusetts, and Miami, Florida. The Center has also applied for and received a grant under which a second Teacher Corps Program will be administered beginning in June, 1971. The principal city involved in this program is Providence, Rhode Island. There are several unique features about the new Teacher Corps Project planned for 1971-1973. It is the only Teacher Corps Project in the United States that works with African Studies, is being implemented at the middle school level, exclusively recruit applicants

with previous experience in Africa (primarily through the Peace Corps), is being planned for as many as sixty interns, and entails inter-state cooperation, i.e., between the Commonwealth of Massachusetts and the State of Rhode Island.

b. Ford Foundation. Workshops in micro-teaching, comprehensive achievement monitoring, and behavioral objectives were conducted by the Center Fellows at the Universidad del Valle, in Cali, Colombia. This project was conducted in cooperation with CREE (El Centro de Recursos de la Ensenanza).

c. AID/Educator. Four Fellows of the Center for International Education conducted a one-month survey of non-formal education in Ecuador. During the survey the activities of twenty-five educational agencies were reviewed and three proposals regarding the involvement of the University of Massachusetts with various educational agencies have been submitted.

d. Uganda Project. In November of 1970, Dwight Allen and R. Michael Haviland made an inspection tour of the Tororo Girls' School, Tororo, Uganda. Recommendations concerning increased staffing, in-service education workshops for the Tororo Girls' School teachers, and increasing the number of Ugandan participants were submitted to the Ministry of Education of Uganda and to U.S.A.I.D. The recommendations have now been effected.

e. Non-Western Studies Workshops. These workshops were conducted both at the University of Massachusetts and in Springfield for more than 150 area teachers. In addition, consulting teams from the Center worked in the area of non-Western studies with the school systems of Conway, Sturbridge, and Springfield.

CENTER FOR EDUCATIONAL MEDIA AND TECHNOLOGY

The Media Center is just completing an exciting year of transition and growth during which a variety of off and on campus projects were generated, and a new academic thrust was developed to meet the expanding crisis in classroom communication. The enthusiasm and academic program has been and will continue to be primarily motivated by the critical need for more sensitive and effective classroom communicators. The Center believes it is imperative that educators

realize the new communications orientation of their students and that by ignoring the potential of the new communications vehicles for the classroom, educators will continue to condemn students to crippled, frustrated educational lives.

The Center has embarked on a plan to launch a statewide campaign to educate educators and expose the dilemma of the media-child: the Media Institute on wheels is a prepackaged multi-media presentation, which has been very well received in the few places it has been tested. It was designed to awaken school systems to the impact of media on their students. An ongoing in-service seminar has been established for all teachers within a fifty mile radius; a pamphlet, "Dealing with the Television Child: An Educational Crisis," was created by Nat Rutstein, the new Center director and will be sent to all principals and superintendents of schools in the state; and in cooperation with the Cooperative School Service Center, we are scheduling and promoting our institutes and seminars. Just recently, after an address from the Center Director, the Massachusetts Audio Visual Association responded supportively to the campaign. The Center is confident that its campaign efforts will sensitize the larger educational community to the reality of the image-oriented student and to our concern that all educators become effective classroom communicators.

As examples of community involvement outside the University, the Springfield Action Community Bureau has recently awarded the Center contracts for film stories highlighting educational and social problems in Springfield; the Center has held Media Institutes for Northern Educational Services and the Head Start Instructors of Springfield; and as well as assisting public school systems, the Center has provided technical expertise and general assistance to developing alternative schools and systems. Most notably, we have helped establish communications' centers, school newspapers, school TV shows, etc. at SASSI Prep, the Lowell School System, and Holyoke Street School.

Some noteworthy and successful programs are the following: Swaziland Cable TV - a project which has obtained support from UNESCO, to bring closed circuit, cable TV to Swaziland; "Que Tel, Amigos" - a TV program produced and directed by our staff and TV counterpart to the radio show of the same name which has just won the PBS award for the most outstanding public radio service program in the country; "Mother, the First Educator" - TV program that could become nationally syndicated and is being developed in cooperation with members of the Children's TV Workbook and "Sesame Street" staff; and "New Magazine on Education" a TV program designed for the PBS network, that will be a springboard for a world-wide educational information dissemination division in our Center.

CENTER FOR EDUCATIONAL RESEARCH

There are three categories of direction for the Center for Educational Research : Research, Training, and Service. Many members of the Center are actively engaged in research in the general areas of methodology of statistics, measurement, evaluation, research, and data processing. A number of the members of the Center have published methodological articles in major journals. The Center for Educational Research offers educational experiences in statistics, measurement, evaluation, research, data processing, operations research, and research development and dissemination or any combination of these that will meet a student's career needs and interests.

Major Accomplishments

Internal reorganization. The Center conducted an analysis of the functions that need to be performed in order to operate effectively. A process was instituted that allowed each member of the Center to choose functions to perform. Each person was given the authority to act subject to review by the Center. The group was very satisfied with the operation of this differentiated function approach and expect even greater effectiveness next year.

Evaluation Methodology. Members of the Center have considerably extended the development of a comprehensive methodology for the purpose of providing data for decision making. A full year course evaluation methodology and the techniques of methodology development and research was instituted for the first time.

Comprehensive Achievement Monitoring. The Project for Comprehensive Achievement Monitoring (CAM) has completed its fourth year under the Charles F. Kettering Foundation grant to Dwight Allen and under the direction of William Gorth. CAM has developed a viable system of improving evaluation in the public schools. Twenty schools in Massachusetts, Connecticut, New York, New Jersey, Minnesota, and California are now using CAM with more than fifteen thousand students. The Title III grants by the U.S. Office of Education have supported the continuing development of the project. Information about CAM has been presented at the following professional meetings of: American Educational Research Association, National Cuncil on Measurement in Education, Educational Technology, Northeastern Educational Research, and Association of Educational Data Systems and at workshops at the University. CAM has been included as a major component in the system for Program Evaluation and Design (SPED) developed by Dr. Robert O'Reilly, Chief, Bureau of School and Cultural Research, New York State Education Department to evaluate reading programs in Title I projects in New York State. Project CAM is working with New York Institute of Techology in developing skills in CAM data processing.

Behavioral Objectives and Test Item Bank. A large collection of behavioral objectives and associated test items for elementary and high school reading, mathematics, sciences, and other subjects is being gathered with the purpose of distributing them to teachers in the Northeast. Computer programs are available to print lists of objectives and items as well as tests in ready to use format.

Curriculum effectiveness. Attracting non-research majors to courses and experiences offered by the Center for Research has been a prime concern in recent years. During the past year, several courses were offer-

ed which attracted and retained numerous students outside the research center. In addition, center faculty provided a variety of modualr-type experience which were most favorably received. As a result of these experiences, the Center's pedagogical image has been enhanced considerably.

Research Support Pool. Plans have been made during the year to re-establish a drop-in type advisory service for the School audience. This sevice will be housed somewhere in the School of Education building; it will be staffed by faculty and graduate students from the research center, and it will be open to all. Particular emphasis will be placed upon developing appropriate designs for studies planned and for identifying useful research strategies which can strengthen data gatherings and analysis undertakings.

Simulation modeling. The EDSIM 1 and time portion of EDSIM 4 models are being validated with data furnished by the Learning Research and Development Center, University of Pittsburgh. This study is supported by a U.S.O.E. Cooperative Research Grant, and is resulting in an ED.D. thesis for Mr. William W. Foley. Additional exploratory studies are being performed by Mr. Frederick deFriesse. Presentations of our various computerized simulation models have been made to American Educational Research Association (week-long pre-session of which this was a mojor component), Association for Educational Data Systems, Staff Personnel Utilization Leadership Training Institute, Beaverton (Oregon) Schools, and many local seminars (such as Technical Skills smorgasbord of Center for Leadership in Administration).

School Scheduling. Improvements in computer programs for school scheduling continue. In conjunction with a number of pilot schools changing to flexible scheduling, master schedule building tools are now being developed. Service activities for a small number of schools in New York, Connecticut, and Massachusetts support Mr. Richard Stone, and may support additional graduate students in the future.

CENTER FOR TEACHER EDUCATION

The major activity of the Teacher Education Center for the Academic year 1970-71 was the re-organization of the Center from one focusing primarily on undergraduate teacher education to one focusing on the preparation of teacher educators at the graduate level. As a result of a series of recommendations from the Teacher Education Center, a new organization, the Teacher Preparation Program Council, was organized to assume responsibility for the undergraduate Teacher Education Program. This was done in an effort to involve all of the centers in the School of Education in the preparation of undergraduate teachers. In doing so, many more alternative programs were made possible for the undergraduates than would have been feasible had that responsibility remained with one center. Consequently, the old Teacher Education Center was reformed to become the Center for Teacher Educators, whose primary responsibility will be to prepare teacher educators in both specific curriculum areas and as generalists.

Professor James Cooper did receive a $6,500 contract from the National Teacher Corps to develop training materials to be used in a series of National Seminars for Teacher Corps Programs throughout the country. This was the only grant received by this center.

The Teacher Education Center during 1970-71 has been concerned with both undergraduate and graduate education and its course offerings reflect this concern.

TEACHER PREPARATION PROGRAM COUNCIL

In a hope to alleviate the many problems which have evolved from large-scale undergraduate teacher education at the School of Education, the Teacher Preparation Program Council (TPPC) was created in February, 1971, with broad powers and resources to encourage the involvement of all faculty and graduate students in

undergraduate teacher education. Realizing that undergraduate teacher education is too big a job for one center, TPPC's job this spring has been to break down the one big program which has existed in the past into many new teacher education programs; to get more faculty involved in undergraduate teacher education; and to bring innovations into undergraduate areas - all in a effort to make large-scale teacher education exemplary. Appointed to TPPC were two undergraduates, one graduate student, and six faculty members. Members names are: Richard Clark, Chairman; Norma Jean Anderson, Jon Ball, Paul Changler, Reginald Damerell, William Fanslow, Michael Greenebaum, William Read, and Horace Reed. Associate Dean Earl Seidman is an ex-officio member.

Immediately after being formed, TPPC requested all Centers, faculty and graduate students to originate new teacher education programs and propose them to TPPC. The result is a remarkable array of programs for the coming year, which have been approved by the TPPC and which meet state certification requirements. The TPPC hopes that from a large selection of undergraduate teacher education programs, every undergraduate will be able to find a program which meets his individual needs, and which gives him the kind of education and training that he wants, and finds relevant in today's society.

The "Off-Campus Teacher Education Program K-12", directed by William Fanslow and William Byxbee, is divided into three phases with emphasis on actual field experience. The first entitled "Pre-Practicum" phase may include up to six credits. Through lectures on foundations, microteaching clinics, seminars on field survival, discussion of alternative structures, etc., this phase will help prepare students for the second phase of the program, the field experience. The "Practicum" phase will be a semester-long, off-campus experience including up to 15 credits. This semester will include practice teaching, peer supervision, utilizing concepts learned in microteaching clinics, with periodic reports to the University. Following this phase will be the "Post Practicum", the final phase of the program including about two credits. This phase will involve evaluation of the "Practicum" stage.

The Alternative Schools Program (TASP), directed by Donn Kesselheim is a two-year program (TASP students will receive a Bachelor's Degree at the end of the Senior year and a Master's Degree at the end of the full program) featuring two on-site internships in urban settings, and two 26-day Outward Bound wilderness experiences. The first and third semesters of the program will be spent on campus in learning modules selected from a wide array of options; the second and fourth semesters will be spent almost entirely in internships in metropolitan areas. TASP students will live with families in the community whenever possible and will have firsthand experience in community development and team-building. Most of their time will be spent in getting to know the people that alternative schools will be serving and building a background of skills in community work.

David Day is directing a teacher education program specifically aimed at training teachers interested in pre-school, kindergarten, and primary grade children. The program is built around two field experiences, instead of the traditional one, and ideally these experiences will be in different types of communities and structures, ranging from rural to urban and from highly organized to formal. The "Early Childhood Education Program" (ECE) will provide a year of professional training for juniors, seniors, or as a post-Baccalaureate year of preparation.

For those interested in a less structured program, Marsha and Jeffrey Goodman are directing "Expolorations!" The blueprint for this program will be built by the combined efforts of the group and will involve such things as intensive workshops, weekend retreats, independent study and site observations in many types of schools.

Total immersion for one academic year in the public school system and the self-contained Martha's Vineyard community is the unique feature of the Integrative Program in Teacher Education (IPTE).

Simultaneous with practical classroom experiences, students will pursue a program of common and individualized readings, projects, seminars and conferences. The theoretical, the experiential, and the clinical will be thoroughly integrated.

The "Center for Urban Education Teacher Education Model" (CUTEM) is a program designed to give students a political sophistication to the degree that will enable them to become successful teachers and reform strategists in inner city schools. The focus of the program will be an internship combining teaching and living in an inner city schools. The focus of the program will be an internship combining teaching and living in an inner city community. Methods instruction will occur on site with workshops involving the student, cooperating teacher and graduate supervisor. The pre-internship semester will involve courses to prepare for the internship; after internship, participants will return to Amherst for one or two semesters fo follow-up experiences. Near completion of the two year program, participants will engage in a second practicum unvolving specific projects in curriculum development.

For those interested in the integrated day approach to education, William Masalski is directing a one-year teacher education program entitled "Model Elementary Teacher Education Program" (METEP). The first semester will consist of a 16-credit workshop providing participants with competencies in diagnostic and strategic skills in the management of the Integrated Day as well as in curriculum and content areas. The second semester of the program will consist of an internship in an Integrated Day elementary school.

Consisting of five phases, each a semester in length, the "Teacher Education Program at Mark's Meadow" (TEPAM) will allow students to become involved with elementary education on campus at Mark's Meadow. The program involves a systematic observation of

one or two children whose development is followed over a two-year period, two semesters of full-time student teaching, and course and evaluation work.

Allowing students to get both a B.A. and M.Ed. degree in five years, with the last year being a paid year long job experience, the Sociological, Historical, Philosophical Center (SHP) focuses on integrating practical classroom situations with the related theoretical considerations, avoiding both sterile scholasticism and mindless activity. Students are involved with a tutorial seminar during their second semester junior year, followed by a four week intensive workshop during that summer. During fall semester senior year, students practice teach and take courses, and are graduated in January. Spring semester is spent in graduate course work on campus and the following year the student is placed in a full-time, paid-in-full teaching position in a public school under the supervision of an in-service advisor on the program staff. In June, he receives his Master's Degree.

The International Education Program, directed by George Urch, will give students field experience in other cultures or subcultures, which the program feels will inspire and train teachers to teach about other cultures in America. The Fitchburg Exchange Program will allow a one-year exchange between students from UMass and Fitchburg State College. This is created for students interested in Special Education. Other programs involve the Northeast Regional Media Center for the Deaf, and a program for students interested in distributive education. The TPPC is sponsoring the individualized program for students who are already well along in their preparation, and want to finish in the same framework as they started; and those who are not admitted to other programs and who prefer other routes to teacher preparation.

Other activities of the TPPC have involved determining course requirements, registration procedures, and scheduling. The TPPC

is concerning itself almost entirely with the details of undergraduate teacher education. Hopefully, their efforts will put more emphasis on undergraduate teacher education within the School of Education, and will greatly improve the quality of our new teachers.

CENTER FOR URBAN EDUCATION

The Center for Urban Education has a strong commitment to the undergraduate and graduate students to prepare them for future employment. The Center was involved in developing new teacher training programs - programs that deal directly with the needs of the students and the schools, in order to make our educational system one that will educate and not stifle.

Added to this goal is the need for universities to expand and involve the communities by both bringing the communities to the university and by bringing the university to the communities. The University of Massachusetts handles three Career Opportunities Programs. Under the the directorship of the Center for Urban Education, over three hundred paraprofessionals from Brooklyn, New York, and Worcester and Springfield, Massachusetts became members of the University of Massachusetts.

Since the Center for Urban Education has expanded so rapidly in both programs and research, we feel there is a need to communicate our experiences and findings with people similarly involved in educational programs. It is because of this need and our commitment to be not only an educational center but a resource center, that we have now undergone plans for publishing. A book for the Massachusetts Series entitled The Hope Factor for Urban Education, edited by Byrd L. Jones, is now in preparation.

The Undergraduate Program

This year the Center for Urban Education has sponsored approximately fifty interns in various cities, including Philadelphia,

Patterson, New Jersey, and Boston. The interns have received their methods courses on-site under the supervision of the Center for Urban Education. In addition to providing internships and methods courses, the Center also offers ten courses to undergraduates in order to prepare them for future teaching. During the last year, the enrollment in these courses has exceeded 650 students.

The Graduate Program

The enrollment in the graduate programs (Masters and Doctoral) has increased greatly since last year. We are now serving approximately 75 graduate students. During this past year, we had 12 of our graduate students receive degrees. The Center sponsors graduate courses to meet the needs and requests of the candidates, ranging in subject matter from Urban School Administration to Economics of education, to Research, Planning and Development.

Center for Urban Education Teacher Education Program: (CUETEP)

The intention of this program is to improve the quality of educational experiences for urban children by improving the quality of training for urban teachers. This program is designed to specifically train potential teachers for urban schools; teachers, who, in addition to having the concepts and skills related to learning theory, can become reform strategists in school systems. The focus of this program is an urban internship combining teaching and living in an inner-city community. Introduction to Urban Education serves as the primary entry point to the program and is followed by a course entitled Survival Strategies. This course aids in preparing the students for their internship the following semester. Sites for internships are: Boston, Worcester, Springfield, Philadelphia, Brooklyn, Patterson, and Louisville. After their internships the students return to campus for a series of follow-up experiences. Among these experiences is an evaluation seminar in which the participants evaluate their individual strengths and weaknesses and identify problem areas. Externs may then choose from a variety of advanced courses in Urban Education and related courses in other centers and departments.

Near completion of the two-year program participants will engage in a second practicum experience that will combine with a seminar in curriculum development. Student initiated projects and program related to their self-identified needs will be a vital part of this program.

During the Spring semester 1971, a group of students met with doctoral candidates and the faculty members in a planning seminar for the undergraduate program. The needs of the students, the needs of the schools and the needs of future teachers became the base upon which this program was devised.

Project Broadjump

The University of Massachusetts was established as a new site for Project Broadjump under the direction of the Center for Urban Education. This program ran for six weeks starting July 12, 1970. One hundred and ten boys from New York City were selected along with master teachers and staff from the New York City schools. Together with the staff at the Center for Urban Education and the School of Education, a program combining academic, social and recreational components was instituted.

Career Opportunities Programs

The Career Opportunities Programs are innovative teacher training programs offering on-site undergraduate courses and credit leading to a bachelors degree and teacher certification. The students are paraprofessionals, non-certified classroom assistants who are interested in teaching in Model Cities areas.

The Brooklyn COP involves 200 paraprofessionals in Brooklyn elementary schools. This program is now in its third semester of operation and to date has offered courses such as Introduction to Urban Education, Special Problems in Education, Performance Criteria, Foundations of Education, Rhetoric, Education Practicum, Teaching about the Non-Western World, Physical Geology as well as the Centers for Vocational Education, International Education and Foundations of Education.

The Worcester/Springfield COP involves 40 paraprofessionals from Springfield and 45 paraprofessionals from Worcester. In addition to these paraprofessionals, there are 20 on-campus paraprofessionals who serve as teacher trainers, as well as being students in the COP program. The courses taught in Worcester during its three semesters in existence have been: Rhetoric, Urban Community Relations, Education Practicum, Methods for Teaching Reading, Government, Introduction to Urban Education.

Similar courses have been taught in Springfield. Again, there has been a great deal of cooperation with the English Department and the Government Department as well as the Center for Early Childhood Education.

In addition to the educational programs mentioned, the Center for Urban Education has been actively involved in volunteer planning and consulting. Members of our center have participated in various conferences across the nation such as the Black Awareness Conference at the University of Ohio at Athens and the Urban Administration Leadership Conference at Michigan State. The National Urban League has called upon us to consider some of its proposals. We have also participated in active planning at Mary Holmes College in West Point, Mississippi. The Center has participated in some volunteer counselling in Springfield with Representative Lapointe and is now in the midst of planning an International Education Conference possibly to be held in Pasadena, Calfiornia.

NON-CENTER

The Non-Center consists of all graduate students and faculty who are not formally associated with a Center. This report will restrict itself to the two most prominent foci of activities within the Non-Center. These two foci are the Program for the Study of the Future in Education and the Program for Instructional Applications of Computers.

Program for Instructional Applications of Computers

The program in Instructional Applications of Computers is a highly specialized program of graudate study with major emphases in the area of computer-assisted instruction (CAI). As a field, CAI is in an embryonic stage. Appropriately, the formal membership of this program is limited, but growing - two doctoral candidates enrolled in 1970-71 and one additional doctoral candidate expected for the coming academic year.

Physical resources of the Computer-Assisted Instructional Laboratory have been expanded during 1970-71 to include two computer terminals which are linked by way of phone lines to the UMass CDC 3600 computer resident at the University Computer Center. Faculty support has been primarily one faculty member from the School of Education, plus supplemental assistance from the Department of Computer Science and Hampshire College.

Three courses were offered this past academic year, plus a number of single seminars, demonstrations, and individual tutoring on the use of computers in education.

Four modest projects have been initiated during 1970-71:

1. Teaching Children Programming. A half-dozen 5th grade children from Marks Meadow Elementary School are being individually tutored in APL programming.
2. Computer Games. A total of over 100 children played a variety of intellectual games programmed for computer usage.
3. CAI Research. A preliminary study of the efficacy of artificial intelligence techniques in computer assisted instruction is being conducted.
4. Visiting Speakers. Three persons from the field of computer-assisted instruction were invited as guest speakers.

April 12, 1971, marked the first meeting of persons in the five-college area involved in computer applications in education. The meeting was called by Howard Peelle of the Non-Center.

The future outlook for this program is bright when viewed in long-range perspectives. New research and development thrusts are expected in the following areas: CAI Curriculum, Programming Languages, Computer Simulations. Plans to integrate the CAI Laboratory with Marks Meadow Learning Resources Area have been laid for the purposes of providing teacher-training and in-service workshops in tandem with student usage of computer hardware, software, and instructional applications.

Program for the Study of the Future in Education

The Program for the Study of the Future in Education has expanded in size and scope this past year. Two undergraduate and two graduate courses in educational futuristics were offered, along with many modular experiences based on the importance of futuristics for the teacher. The Program also designed an in-service workshop for Antioch-Putney graduate school, and extended its contacts with other workers in futuristics across the country. Several presentations were given by the Program at the First Annual Convocation of the World Future Society, and the Society has published papers in educational futuristics by members of the Program. A workshop in futuristics and the University has been scheduled for this summer.

Members of the Program have developed applications of futuristics methodology to the classroom which are unique. For example, the Delphi technique, which is used to give a probable date by which a future event may take place, has been modified for classroom use even in the early grades. This modified Delphi offers teachers a powerful way of incorporating future concerns into classroom curriculum, and provides a research vehicle for

determining how students' opinions and values about the future are formed. Research is now being conducted on using this modified Delphi outside the classroom as a knowledge diffusion instrument.

Perhaps the most impressive accomplishment is that the Program has been developed primarily through the efforts of graduate students. Goals for next year include extending present programs, obtaining outside funding, and gaining a full time faculty position.

The outlook for the Non-Center for next year is bright. programs will continue, there will be new people active in the Non-Center and there remains the potential for completely new, untried programs to emerge.

SPECIAL PROGRAMS AND PROJECTS

"I think you need to strive to articulate better with the other schools. In other words, when you are planning to initiate a new program you should consult with neighboring departments and schools. I am sure that this will save a good deal of time and grief."

Chancellor Oswald Tippo
September, 1970

Achieving Contemporary Relevance

We hold racism* to be the central pathology of our time and the most challenging issue facing all social institutions. The damage created by not dealing with this issue has reached such alarming proportions that tackling the problem head on can brook no farther delay.

Since institutions function as the primary means of transmitting racism to the oncoming generation, Education, if it is to achieve contemporary relevance, must fully address itself to this issue by mounting a massive program and intervention designed to block the transmission of racism to the next generation.

Commitment to such a program means, at the very least, that no student undergraduate or graduate, will be allowed to finish his course of study without attaining a full understanding of this issue and how it has a bearing on his behavior and attitudes as an educator. At the most, commitment to such a program will require the School of Education to rearrange its priorities; it means modifying all the policies which govern our operations (ranging from admissions procedures to faculty recruitment criteria) and revamping our courses and Center offerings to reflect those priorities. Finally, it means allocating as many material and human resources as are required to get the job done.

Nantucket
31 March 1971

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*We are presenting the definition of racism that will be in operation throughout our efforts. This definition of racism is the same that the Kerner Report speaks of -- the racism that is a part of our daily American life.

Racism is the ingrained belief of the superiority of one race over other races. In America at this time in history, the White race is the dominant (superior) one and in a position of power. This power is used to oppress Blacks and other minority races and to maintain the status-quo.

Racism is manifested in institutions that work to the advantage of Whites and to the disadvantage of Black people and other racial minorities; whether those institutions and policies are consciously racist or unconsciously racist is not the issue.

EARLY CHILDHOOD EDUCATION: ANNUAL REPORT 1971

In the second semester of the academic year 1970-71 the Early Childhood Education Program joined with the Compensatory Education Program to create the Center for the Study of Human Potential. The joining of resources from each program will substantially strengthen the Early Childhood sequence.

An additional faculty position was allocated for Early Childhyod Education, this position was filled by the appointment of a senior faculty member. The addition of their new person will allow the Center to offer a more balanced graduate and undergraduate program.

The Head Start Leadership Training Program was operating the second successive year. Trainers in Head Start Centers from Massachusetts and throughout New England spent five weeks in intensive training on Amherst campus. Unquestionably their program has made a significant impact on both the Head Start personnel in training and the graduate students who formed the important nucleus of the training team. Clearly the Centers' participation in the training of Head Start personnel continues to be a major service contribution to the education of young children throughout the area.

Final plans were developed in the Spring 1971 for the full scale operation in 1971-72 of an undergraduate emphasis on Early Childhood Education. In September, forty students will spend a full year working entirely in a rather unique program of professional study. Students will have an integrated year in which theory and knowledge of teaching young children will be molded with a series of different field experiences. Their program will produce coupled, semetrive, and knowledgeable teachers for the state kindergartens and primary schools.

Perhaps the most frustrating aspect of our program is that we could without any difficulty admit twice as many students. Early Childhood Education is coming of age in Massachusetts and the University is in a position to play a significant role.

OCCUPATIONAL EDUCATION PROGRAM

The major accomplishments of the Occupational Education Program have been:

1. The establishment of an experimental junior transfer program, wherein potential distributive education teachers can complete their technical requirements at junior colleges and then transfer those credits to UMass. They gain teacher certification at UMass., while they complete the requirements for a B.A. degree. There is every reason to believe at this time that junior college transfers can be successful here. This program provides a source of distributive education teachers, provides options for junior college graduates, and better utilizes the resources of the University. The program has officially been accepted as one of the TPPC teacher education programs.

2. As a result of the completion of An Evaluation of Adult Basic Education Programs in Massachusetts, the Massachusetts Department of Education, Bureau of Adult and Extended Services awarded a second contract to compliment the recommendations to develop a model for the recruitment of functionally illiterate adults to Adult Basic Education programs. This model is currently in the evaluation phase with a fiscal report due August 31, 1971. To date, two contracts totalling $47,500 have been secured. The State Department of Education has indicated a willingness to grant additional monies thereby assuring continuance of the emerging adult education component of the center.

3. The Center conducted a two-week workshop for people from industry who wanted to become vocationally certified. The workshop incorporated micro-teaching, human relations, media, philosophy, methods and materials into a 12-hour day schedule.

4. Center members taught four (4) off-campus courses. These in-service courses serve as a means of informing college professors of the changes in public education, as well as informing the public schools of the happenings at the School of Education at UMass.

5. The Center members took an active part in the Carrer Opportunity Program in Brooklyn. Every week Center members went to Brooklyn as

discussion leaders, and one major lecture was delivered by a Center member.

6. The Center continually offers a series of courses which focuses on challenges, questions, and analyzes the latest developments in occupational education.

The special program or project operated by the Center is the Massachusetts Information Feedback System, which is now housed in Amherst as an arm of our Center. The Feedback System is designed to research the variables -- time, teacher, material, methods, etc. — in vocational courses and provide local school districts with research findings. The program is philosophically committed to centralized information retrival and local control of education.

READING PROGRAM

Reading Clinic

We have operated a reading clinic from a room and facilities shared with the Speech and Hearing Department in Bartlett Hall. We have completed diagnostic case studies on 44 children and have provided remedial instruction for approximately 20 children, all from the local schools. We have cooperated with the Hampshire College Early Identification Program by completed diagnostic case studies on eight of their children. We do not expect to have the use of the room in Bartlett Hall next Fall. We need a room in the School of Education if we are to continue our already sparce clinical services.

College Reading Study Center

We have a doctoral assistant who directs the College Reading Study Center, a no fee, no credit course in reading and study skills. This year four five-week courses were offered serving 150 students. A successful attempt was made to offer the course in the dormitories. The Student Union provides us with a room from which to

provide this course and in which to store our many materials.

In addition, the Reading Program has provided the CEBS program with a director of the Reading and Study course and several tutors during the year. Approximately, 200 students have been served.

MARATHONS

During the academic year 1970/71 the School of Education, through the office of the Associate Dean for Special and Off-Campus Programs, sponsored two educational "Marathons". An educational marathon is a week-long event when most classes in the School are cancelled in favor of a wide range of intensive experiences focusing on the problems and potentialities of educational change. Marathons benefit the School in several ways: they allow faculty and doctoral students to schedule special learning experiences to supplement their regular course material and at the same time allow for a great number of events outside of the standard curriculum. Participation in marathon events gives UMass students an opportunity to earn academic (modular) credit for activities outside the usual classroom and course structure and gives students a chance to interact directly with a great many UMass faculty, thus facilitating advisement and future course choices. Perhaps most importantly educational marathons allow the School of Education to open its doors to interested students, teachers, parents and school and college administrators and others from throughout Massachusetts and beyond in order to mutually explore educational concerns shared by all.

The fall marathon--"SomethingElse '70"--was held at the School from November 16-20. It featured some 500 events--seminars, lectures, films, plays, demonstrations, workshops, and a mock trial--all organized around the theme "Alternative Futures in Education."

The spring marathon--"Alternative Schooling in an Urban Society"--was held from April 12-16 and was similar in format and participation numbers to the fall marathon. Special features of the spring marathon included a day devoted to considering the special problems and potentials

of urban education and a special preview of the undergraduate teacher education programs to be operationalized in the fall of 1971.

SUMMER WORKSHOPS

During the summer of 1970 the School of Education sponsored six workshops. These workshops were coordinated through the office of the Associate Dean for Special and Off-Campus Programs. These workshops were attended by teachers and school administrative personnel from Massachusetts and other states.

1. Outward Bound Educators Course. 36 participants, July 15-August 15. The Outward Bound workshops combined an intensive twenty-six day set of experiences in a wilderness setting--designed to promote self-awareness and self-growth through exposure to hardship and danger--with a five day intensive follow-up seminar to study ways to transfer many of the concepts and methods of Outward Bound's "experiental" form of education to the classroom.

2. Innovations in Education. 53 participants, July 6-17
A two-week, three phased workshop which offered preparation for assuming a flexible schedule, differentiating a teaching staff or conducting an in-service micro-teaching clinic. The workshop itself was flexibly scheduled in that participants could register for either one or two phases, and form their own program sequence by choosing appropriate modular offerings such as team teaching, open labs, performance curriculum, logistics of micro-teaching clinics, use of para-professionals, teaching supervision, use of Flanders Interaction Analysis, and computer-assisted instruction. Resource centers and resource personnel on demand were also available to participants.

3. Manhattanville Music Curriculum. 12 participants, July 13-25
The Manahttanville Music Curriculum Workshop was sponsored jointly by the School of Education and the Music Department. It provided practical experience with contemporary music and musically creative techniques

as well as contemporary educational principles and classroom strategies based on the Manhattanville Music Curriculum Program sponsored by the Arts and Humanities Division of the U.S. Office of Education.

4. New Methods of Evaluating Student Achievement: Comprehensive Achievement Monitoring. 38 participants, June 22-26. The workshop was designed to teach teachers and other educators all the skills of new methods of evaluation. Such skills included: knowledge of the definition of curriculum objectives and structure, skills of preparing and pilot testing achievement test questions, techniques of analyzing and interpreting evaluation results, procedures for designing an evaluation to gather information necessary for decision making, and awareness of the uses of computer technology in analyzing the reporting evaluation results.

5. Distributive Education. 20 participants. June 8-9. This workshop was offered primarily for high school and junior college teachers and coordinators in distributive education and covered such topics as the selection and guidance of students, cultivation and evaluation of distributive businesses as training stations, instructional materials and equipment, and design of the classroom laboratory.

6. Workshop in Environmental Education. 40 teachers and some 25 secondary students, July 13-17 and July 27-31. The workshop was designed to stimulate innovative approaches to environmental education and to encourage participating teachers to assume leadership in their respective schools in promoting and developing curricula, in all subject areas, which are more consistent with our growing environmental crisis.

MARKS MEADOW SCHOOL

1970-71 was a big year at Marks Meadow School. A new program, a new look, and a new principal made this a year of change. The "new program" refers to the development of differentiated staffing, vertical grouping, and team teaching patterns throughout the school as part of our movement toward truly non-graded, individualized learning. The "new

look" refers to the interior remodelling which facilitates the new program. Over the summer many interior walls were removed and carpeting installed to provide large, usable spaces for our four teams, the Early Childhood Team, the Primary Team, the Beginning Intermediate Team, and the Intermediate Team. The new principal is Mr. Michael Greenebaum, replacing Mr. Joseph Cebula, under whose leadership the development of the new plans took place.

Visitors to Marks Meadow on a Friday afternoon would see groups involved in woodworking, leather working, marionette making, sewing and knitting, cooking, wrestling, playing the piano and violin and working with computers. Additionally, visitors observed the remarkable integrated arts workshop called "Lollipop" as well as a variety of hobby-centered groups.

Marks Meadow has both benefited from and contributed to the activities of the School of Education. It has provided responsible professional supervision for teachers-in-training, both assigned interns and students doing special projects for their methods courses. In return, children have received specialized individual instruction in math, reading, and science, as well as special programs in the development of human relationship skills. In return for the training of novice teachers in the area of math, Marks Meadow teams have each received complete sets of math manipulatives to help in the development of mathematics concepts. As the year progressed the School of Education and Marks Meadow personnel began discussing the development of a program to teach children the use of computers. This program was introduced into the Learning Fair and will be integrated into the regular curriculum.

Several important things did not change during 1970-71. The dedication of Marks Meadow able and experienced staff, the commitment to responsible innovation, and the focus upon the child as an individual remain the foundations upon which the educational program is built. We can look forward to 1972 secure in these foundations.

THE COOPERATIVE SCHOOL SERVICE CENTER

During the summer of 1970, CSSC organized a study of recognized needs

of school systems in Western Massachusetts. Supported by funds from Continuing Education, two graduate students interviewed superintendents getting both their suggestions and their reactions to suggestions made by others. It was assumed that these visits would have two effects, i.e., provide a guide to direct CSSC efforts along lines chosen by the schools, and, to make personal contacts which would be valuable. In neither instance were the efforts entirely successful. Some of those topics which had appeared to be of paramount interest in the summer drew little or no response in the fall while others which seemed inconsequential before school opened in September became intriguing soon thereafter. While all reports of initial visits were good, they invited further visits which resources did not allow.

The summer study introduced efforts in the fall which can be summarized as follows:

1. A revision of publication schedules in which the usual three issues of Trend magazine were reduced to a single spring issue which was devoted to the growth of futuristics as a field of study.

   Four newsletters were sent to all administrators and teachers in the area with format and content designed to attract teacher readership. Its most important hope lay in its use as a vehicle through which teachers learned of interesting happenings in nearby schools where they could find encouragement for their own innovative impulses. For both publications representatives in the schools and colleges have been identified. They have been invited to serve both as correspondents and as editorial advisors. Some have functioned - more found this invitation to be one too many.

2. A variety of workshops were organized to serve teachers and/or administrators addressing such topics as Planned Program Budget Systems, Motivation and Leadership for Implementing Change in Schools, 21" Classroom, Ecology, Use of Computers, Problems of the Custodian (for custodians), Students' Rights, Teachers' Rights, etc. There is room for substantial expansion of this service if the cost can be kept low and if news of their existence can be communicated to teachers.

3. CSSC working through Continuing Education can be a powerful force in carrying the resources of the University to the schools in a form which benefits children while contributing to both institutions. As with the workshops, courses designed to fit the needs of a particular school system are likely to be more effective than those set either to satisfy a generalization of school needs or the demands of a recognized academic discipline. Two such efforts this year have been highly successful - one fell before too great a burden of administrative detail. The successes provided a study of elementary school curriculum and the other a study of the teaching problems which arise when a school moves from traditional grammar to a linguistics approach.

4. Following work done in a previous year, CSSC maintains its consultant registry. In this library of talent may be found expertise to which schools may turn whenever their problems might be benefitted by an invitation to an outside expert to come, to look, to analyze, and to recommend. This seems to be a service all should use but it is at the same time, unhappily, one which School Committees have not used.

Since CSSC is a creature of school systems which pay dues for membership - and at the same time a creature of the University, it is appropriate to comment on this relationship. Briefly the school systems contribute their dues to its operation. The University contributes the time of the Executive Secretary, the time of his secretary, a graduate assistant, office space and equipment, and mailing and telephone costs. The control of CSSC rests in its membership usually expressed through its Executive Committee. In view of the fact that the Commonwealth is the beneficiary of this organization in so far as it contributes to the education of its young, no measuring of contribution from one or another sector is pertinent. All of us are by choice devoted to better education of the young.

Membership in CSSC has been opened this year to include the non-public schools. Only a few have responded but that few open a door which may

become a base for a better understanding of alternative schooling within the state.

EDUCATION LIBRARY

In August 1971, the Education Library will move to the new Graduate Research Center. Since the opening of the "new" Education Library in 1961, the collection of books and periodicals has expanded vastly. The following statistics of the holdings of the Education Library contrast what was moved into the Education building in 1961 with the present:

	1961	1971
Professional books	2,820	17,449
Reference books	200	670
Elementary textbooks	1,041	2,700*
Secondary textbooks	814	2,400*
Bound periodicals	0	2,925
Juvenile books	1	4,485
Curriculum guides	0	1,405
TOTAL BOOKS	4,876	32,034
Microfilm	0	236
Microfiche (ERIC)	0	67,402

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	1961/62	1970/71
Circulation	11,617	56,141

An estimated 150,000 cards index the Education Library.

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*Estimated figure; old editions are removed when superseded by new ones.

In 1971, 93 subscriptions to peridoicals were sent to Education. In 1971, almost 400 titles are being received regularly and there are 2,925 bound volumes. In addition to the growth of texts and periodicals, the Education Library has set up a Children's library/ Resource Center for the Marks Meadow Elementary School. Special programs are provided for the Marks Meadow children which range from story-telling to library skills.

Presently, the library staff is composed of one professional librarian and three full-time assistants. Thirteen students worked part-time during the past year for a total of eighty-one hours per week. An international and inter-racial flavor is added to the staff as students from Pakistan, India, Taiwan, Hong Kong, Greece, Korea, the Phillipines, and other countries have worked in the library. The staff and students have always found the Library an interesting place to work. The varied duties, surprising questions, and intriguing clientele prove that there is more to library work than stamping a book. While occasionally frustrating, library work is more often deeply rewarding as we feel we are a definite link in imparting knowledge to students and faculty.

SCHOOL COUNCIL

During this academic year, the School Council, as the primary policy-making body in the School, has been responsible for directing and instituting two comprehensive changes.

First, recognizing the need for a total re-organization and improvement in the Teacher Education Program, the School Council, on the recommendation of the Ad Hoc Committee to develop mechanisms for the creation of the TPPC (Teacher Preparation Program Council) voted to approve the TPPC as constituted below:

CHARGE AND AUTHORITY:

TPPC is responsible for all graduate, undergraduate, pre-service and in-service teacher education programs of the School. All teacher education programs must be cleared through TPPC, and TPPC specifically has the power to accept, reject, or modify.

TPPC is responsible for policy-making, admissions, leadership, administrative coordination, and program interpretation.

Given the School's commitment to approximately 2,000 undergraduate education majors, 1,700 prospective secondary teachers, and 900 entering students each year; given the fact the TPPC will be held accountable for the quality of all teacher preparation programs; and given the fact that TPPC has no faculty explicity allocated to it, the TPPC, as needed, may utilize some staff resources of the Centers and Programs necessary for the development and operation of teacher preparation programs.

RESOURCES:

Minimum resources will include:

1. All supervisory assistantships in the School
2. Half of the teaching assistantships in the School
3. All services of the student teaching placement office
4. Full cooperation of and services from the undergraduate advising office
5. Travel budget allocated to supervision
6. Secretarial services at least at the present teacher education level

7. A publications-communications-phone budget at double the present teacher education level
8. A full-time staff assistant or associate
9. At least 50% release time from other duties for the Chairman
10. Full cooperation of and services from all Centers and Programs of the School

LIFE:

Initial members of TPPC will serve at least until May 30, 1972. At that time, TPPC and the School Council's Executive Committee will develop means for the replacement of retiring members. By May 30, 1973, the School Council will review the entire teacher education effort in the School, and the TPPC will be revised or replaced by whatever mechanism the Council deems appropriate.

Operation of the 1970-1971 teacher education program will remain with the present Teacher Education Center.

Second, at the request of the Dean, the School Council undertook the investigation of a proposal for a Completely Modularized Curriculum. After many hearings at which the advantages and disadvantages of the proposal were weighed and thoroughly investigated, the Academic Matters Committee moved, and the School Council voted:

> THAT THE SCHOOL COMMIT ITSELF AT THIS TIME TO A FULL CONVERSION FOR SEPTEMBER 1972 IF APPROPRIATE ADMINISTRATIVE SUPPORT SYSTEMS ARE DEVELOPED, EVALUATION PROCEDURES SPELLED OUT, FACULTY AND STUDENT COMMITMENT IS DETERMINED, UNDERGRADUATE ADVISORY AND COUNSELING PROCEDURES ARE OPERABLE, AND IMPLEMENTATION PROCEDURES ARE CLEARLY DEFINED, AND THAT THESE SYSTEMS AND PROCEDURES ARE IN FACT ACCEPTABLE WILL BE DETERMINED BY A GRADUATE ASSEMBLY AND SCHOOL COUNCIL VOTE ON OR BEFORE FEBRUARY 1, 1972. IN THE INTERIM, THE MEMBERS OF THE SCHOOL OF EDUCATION BE ENCOURAGED TO EXPAND THEIR MODULAR OFFERINGS, CONVERT EXISTING COURSES TO MODULAR FORMAT, AND PLAN FOR COMPLETE CONVERSION BY THE FALL OF 1972, USING THE 1971-1972 ACADEMIC YEAR TO EVALUATE PILOT PROGRAMS, AND
>
> THAT, WHERE APPLICABLE TO GRADUATE PROGRAMS, THE APPROVAL OF THE GRADUATE ASSEMBLY IS NECESSARY, AND
>
> THAT THE SCHOOL COUNCIL APPOINT AN ENLARGED COMMITMENT TO BE RESPONSIBLE FOR ALL AREAS OF PLANNING, DEVELOPING, AND EVALUATING MODULARIZATION. THE DEANS, DIRECTOR OF GRADUATE STUDIES, THE ACADEMIC MATTERS COMMITTEE AND THE EXISTING MODULAR CREDIT COMMITTEE, AND TWO UNDERGRADUATES TO BE NAMED BY THE ENLARGENED COMMITTEE AFTER RECRUITMENT THROUGH LOCAL MEDIA AND THE UNDERGRADUATE AFFAIRS

OFFICE WILL CONSTITUTE A STANDING COMMITTEE WITH THE PREROGATIVE TO ESTABLISH APPROPRIATE AD HOC COMMITTEES TO DEVELOP PROPOSALS AND RECOMMENDATIONS. THE COMMITTEE WILL BE CHARGED TO;

1. ESTABLISH POLICY GUIDELINES FOR MODULAR OFFERINGS. THIS INCLUDES GUIDELINES FOR FACULTY OFFERING MODULAR EXPERIENCES AND STUDENTS TAKING MODULAR EXPERIENCES, AND A CONSIDERATION OF THE INTERFACE WITH THE UNIVERSITY PRACTICES AND POLICIES. THE GUIDELINES SHALL FOLLOW THESE PRINCIPLES; THE COMMITTEE REAFFIRMS THE RIGHT OF INDIVIDUAL FACULTY TO DETERMINE THE AMOUNT OF TIME REQUIRED TO ACCOMPLISH TEACHING OBJECTIVES IN A PARTICULAR LEARNING EXPERIENCE AFTER MUTUAL NEGOTIATION BETWEEN PROGRAM NEEDS AND INDIVIDUAL FACULTY DESIRES. THIS RULES OUT ARBITRARINESS IN STATING THE LENGTH OF THE MODULAR OFFERINGS.

2. PROPOSE A MEANS FOR PERMANENT MONITORING AND EVALUATION OF THE CURRICULUM.

3. COMMUNICATE WITH THE UNIVERSITY ACADEMIC MATTERS COMMITTEE.

4. CLARIFY THE GOALS AND EVALUATE THE EFFECT OF THE FALL MODULAR CREDIT OFFERINGS AND REPORT ITS EVALUATION TO THE COUNCIL BY NOVEMBER 15.

These two actions will have a significant impact on the School. In both cases, the School Council acted as a concerned, deliberative, legislative body attempting to balance current institutional capabilities and desires and future needs and demands.

In order to strengthen its ability to act decisively and quickly as well as deliberately, several Constitutional Amendments were moved and voted.

1. Because of the crowded Council agenda controversial issues often can not receive much more time and attention than non-controversial ones, it was voted that the Executive Committee (Article II, Part G) be given the power

   "To make decisions on non-controversial issues and report these decisions at the next meeting of the School Council, which body may veto any such decisions by a majority vote of the members present."

2. Because of the growth of the School of Education community, it was voted to extend membership in the Education Assembly to the entire Community. Article V was amended to read

"A. Responsibility: The Education Assembly shall be the major advisory body and general forum of the School of Education. The moderator of the Education Assembly, in consultation with the Executive Committee, shall invoke special procedures to promote maximum participation.

B. Membership: The Education Assembly shall be composed of all members of the School of Education community, which shall include anyone concerned with the affairs of the School of Education.

C. Moderator: A moderator shall be elected by the School Council."

3. In order to make governance more responsible, efficient, and responsive, two other amendments were passed:

"a) Article II, Part C, to read

C. Alternates: Each Center shall elect an alternate representative. The alternate shall have the full rights of a member at Council meetings when the regular member is not present.

b) Article II, Part F, amended by deleting '2/3' and adding in its place the words 'a majority'."

The Executive Committee also took action to increase its effectiveness by establishing five new Standing Committees. These cover the areas of admissions and records, student affairs, budget and resource allocation, library and communicating and policy implementation and follow-up. It is hoped that these committees will provide a means for insuring that

decisions are made as quickly and effectively as possible on the basis of thorough research and investigation.

THE JOINT CONFERENCE ON TEACHER EDUCATION, MARCH 9-11, 1971

During the early weeks of spring semester, 1971, through the efforts of Dr. William Fanslow a committee of doctoral candidates was assigned to visit each of the state colleges that had departments of teacher education. They were charged with finding the answers to two questions: 1) Would you be interested in attending a conference that included representatives from all of the state institutions responsible for teacher education; and 2) if the answer to the first question was affirmative, what topics would you like to see discussed at such a conference? All state colleges with the exception of one answered the first question in the affirmative. Their responses to the second question were carefully recorded by the visiting team and all of the items were reviewed and collated back at the University after all state colleges had been visited. As might be expected, there was a great deal of agreement between the schools as to what they perceived as problems and wanted to see discussed at such a conference. The nine items mentioned most frequently then became the basis for the program for the conference. Each item then became the topic for discussion at an hour and fifteen minute session. For each session, a chairman was appointed to serve as a moderator of the discussion and a presentor was also appointed for each session. The presentor was asked to develop a five or ten minute presentation to elucidate the problem at the present time. This was to serve as a stimulator for the discussion to follow.

A total of 56 administrators, faculty, and students participated in the three-day conference. They were all housed in the new hotel section of the Campus Center and all but one of the concurrent sessions were held in the Campus Center. The keynote speaker was Patrick McCarthy, the Deputy Chancellor of the Board of Higher Education.

During the final luncheon on March 11, the participants were asked to evaluate the conference. During the course of one of the sessions, a number of suggestions were made for continuing the relationship which was begun at the conference and the form these future relationships should take. The results of this evaluation were extremely positive and there was no doubt that the participants desired a continuation of what had been started.

Since the conference in March, a delegate from each of the state colleges and one from the University have met formally to explore the form and function of a permanent organization. Another meeting is planned for late in September after the next academic year gets underway. There is a great deal of enthusiasm for creating a formal organization to deal with many of the problems which we have discussed informally at the last two meetings. While the meetings were intended to be organizational, we have on most occasions lapsed into discussing common problems and seeking solutions for them. This has been found to be extremely helpful to those who have participated.

At this point, we feel we have had a very successful convention. It has made apparent a need that has evidently been rather long standing, that is, to have a formal organization to consider problems faced by all of the state institutions involved in teacher education. We have had two meetings that have brought us closer to creating such an organization. We have made a proposal for assistance from the State to make this organization workable. There are presently plans afoot to continue this effort at the beginning of the school year in September, 1971. We will attempt to follow through on what has been begun and hope that a formal organization will be born out of this effort.

AUDIOVISUAL CENTER - 1970-71

The Audiovisual Center at the University of Massachusetts was established in September of 1949 when the writer, Raymond Wyman, was employed to start such a center to serve the entire campus and to teach courses in the School (then Department) of Education. Except for a brief period of full time teaching, I have always divided my time between University services and teaching.

The AV Center has always had a budget separate from the Department or School of Education but administered through it. There has been a very gradual growth of the budget and resulting services, but these have no more than matched University growth so that media services on a pro rata basis remain about the same.

The Center was originally housed with Education in Liberal Arts Annex. It was then separately housed in the Administration Building, South College. The new School of Education was planned to have extensive and complete (as of that time) media facilities and the Center moved in soon after the building was completed. When tremendous expansion and reorientation of Education took place under Dean Allen, the Center was moved to Thompson Hall.

For many years I was nominally in charge of the academic program in media for the School of Education and a very close relationship between the two media programs resulted. In fact, there was an almost complete integration of staff, equipment, materials and facilities. Under this arrangement a rather complete television system (for the time) was planned and constructed to serve the School and the University. I was also in charge of the WFCR operation during the time that it shared space and staff with the Center in the School of Education.

In 1966 a representative of the U.S. Office of Education who had heard about our comprehensive media program visited the campus and proposed that we enter into an agreement with them to establish a Northeast Regional Media Center for the Deaf. With School and

University approval and enthusiasm, this center was established and it has been expanded each year so that current funding is about a quarter of a million dollars.

In 1969 another representative of the U.S. Office of Education who had heard about our comprehensive program for training media specialists (One of our graduates won the national DAVI scholarship) asked us to undertake a special project to train media specialists to serve the deaf. This program was approved and we are now starting our third group of students in the program.

When the Center moved to Thompson Hall in 1969, the two USOE sponsored programs also moved. Responsibility for the academic media program, the media support program for the School of Education and the television facility were turned over to others in the School. During the first full semester in Thompson Hall, I taught the large basic media course here and the laboratory was conducted by one of my graduate assistants paid from my offset salary. This course has since been taught in the School of Education. Nathan Tilley and I now regularly teach a small enrollment course each semester in this building for the School.

The AV Center in Thompson Hall is now integrated with the two USOE projects in media for the deaf. I maintain liaison with the media center in the School and participate in some School activities as time and proximity permit.

The staff of the Center during the 1970-71 year consisted of the following people with the indicated positions and duties: (see appendix A)

Raymond Wyman	- Director (and Professor)	- Administration
Donald Curtis	- Ass't. Director	- Graphics & Photography
Nathan Tilley	- Staff Ass't.	- Local Production & Project Liaison
Louise Dziuba	- Secretary	- Office and Film Library Manager
Ruth Growhoski	- Junior Clerk	- Clerical and Booking
William Bates	- AV Equipment Technician	- Chief Technician
Edward O'Neil	- AV Equipment Technician	- Repair & Maintenance

Jonathan Carr	- Senior Tech. Ass't.	- Repair & Maintenance
Richard Guerdon	- Tech. Ass't.	- Setup & Operation
Louis Musante	- Senior Tech. Ass't.	- Photography
Ingeborg Litcoff	- 03 Account	- Graphics
Edward Kindness	- 03 Account	- Local Production Lab
Ruth Williams	- 03 Account	- Film Inspection
Students	- 03 Account	- Equipment Operations

Nathan Tilley and I worked on USOE projects approximately three days each week and our offset salaries were used to augment our 03 account and provide most of our funds to employ the personnel indicated above. This arrangement will not be possible in the future.

In addition to the above named personnel, ten full time people and four graduate assistants entirely with USOE project funds share the space in Thompson Hall.

We now fill every available space in the west part of Thompson and additional space must be found for the fall of 1971.

The next page describes the services we intended to provide during the past year. Due to extremely limited staff, space, equipment and materials, we were only moderately successful.

Equipment We have tried to establish sub AV centers in each major teaching building on campus so that every instructor can have easy and immediate access to any equipment he needs and help in producing materials for teaching. We have had almost no resources to establish such building units so we have constantly moved equipment from our Center. We get tremendous service from our limited equipment due to our good shop and competent technicians and thousands of miles on our two vehicles. We have most common AV equipment with the exceptions of television and high quality motion picture and audio production and duplication equipment. (see appendix B)

Libraries The Center has a pathetic film library for a major

University and no libraries of slides, filmstrips and recordings. During a period of tremendous concern for print materials on campus and rapid growth of such resources, there has been no concern or activity in the area of non-print resources for teaching and indivdual learning. This should be a high priority area in the future.

Rentals We must leave all renting of off-campus materials to individual departments or schools. We do provide an extensive library of directories and catalogs for such materials and they are constantly used.

Photography We have one of the most competent technical photographers in the business. He works alone in a makeshift laboratory. We produced approximately 7000 two by two slides and 400 paper prints during the year to support instruction. The photography aspect of our Center and the University Photo Center should be combined under the AV Center to make a much better service available to all those on campus who need it. Several conference and memos concerning this have occurred during the past few months.

Graphics Our one full time professional and 03 account assistant in graphics have produced a large number of the highest quality instructional graphics.

Local Production During this year we set up a "do it yourself" local production laboratory so that faculty and students might prepare audio and visual materials for their teaching and reports. This was a very busy place as students began to exercise an option to prepare reports in other than written form. Many instructors used our help in preparing materials for use in their presentations. Since the person supervising this laboratory was paid out of 03 offset funds, we have had to terminate him.

Consultation There is a tremendous movement afoot toward improved teaching and improved learning opportunities. Media are involved in both of them. Our staff members, professional and non-professional, are constantly asked for help in designing and renovating facilities,

selecting and using equipment, selecting and using materials and preparation of materials. We are perhaps the only unit on campus exclusively involved in improving teaching and learning activities.

In conclusion, I feel that the AV Center has made a substantial contribution to the University with its small but very competent staff, its small but delightful space and its limited but smoothly operating equipment and facilities. Suggestions for expansion and improvement are included in my budget proposals for the future. The University Broadcasting Council is also becoming increasingly interested in the broad field of media at the University and might well change its name to reflect this. It might then become the policy board for an expanded media center.

Respectfully submitted,
Raymond Wyman, Director

Audiovisual Center Services Fall 1970

The University of Massachusetts Audiovisual Center is located on the ground level of the west wing of Thompson Hall.

The purpose of the Campus AV Center is to provide the professional staff with equipment, materials and services to facilitate instruction. We can help in the following ways:

EQUIPMENT: Most buildings and/or departments are equipped with common pieces of AV equipment. These can be scheduled through the department head or building coordinator. A pool of portable and specialized AV equipment is kept at the AV Center. This can be delivered to individual departmental offices or classrooms. It should be scheduled as far in advance as possible, and return arrangements made. A repair service is available along with lamps and other expendable items for all University owned equipment. Projection assistance in some cases can be arranged. (Mr. Bates-Room 22-Tel. 5-2454)

LIBRARIES: The Center has a limited library of motion pictures. A catalog is available on request. They can be scheduled by telephone and sent to offices. Catalogs from most producers are kept on file. We have the NICEM film and filmstrip indices. (Miss Growhoski-Room 18-Tel. 5-2454 or 5-2458)

RENTALS AND PREVIEWS: Materials from commercial distributors should be ordered and paid for out of 13 or 16 accounts by individual departments.

PHOTOGRAPHIC SERVICES: The Center has a professional photographer who will make projection slides from books, magazines or specimens. This service is normally limited to materials that can be photographed in our photo lab and to materials that will be used in classroom teaching. (Mr. Musante-Room 110-Tel. 5-2458)

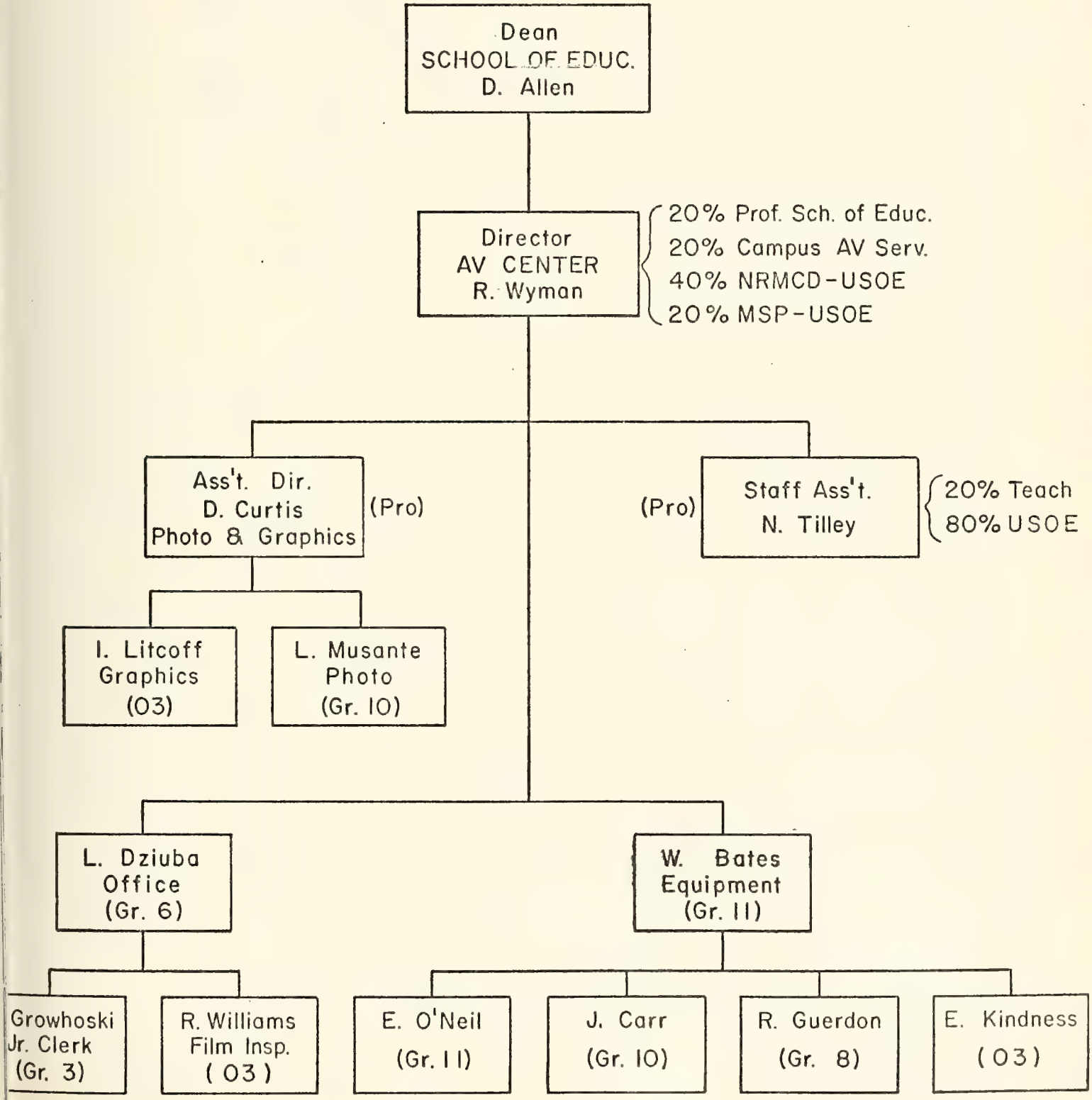
GRAPHICS: The Center will prepare charts, diagrams, maps and illustrations primarily for projection tranparencies to be used in classroom teaching. (Mrs. Curtis-Room 12-Tel. 5-2458)

OVERHEAD TRANSPARENCY PRODUCTION: The Center has an extensive library of masters for making overhead projection transparencies and devices for making transparencies from existing printed materials that are approximately the correct size. (Miss Growhoski-Room 18-Tel. 5-2454 or 5-2458)

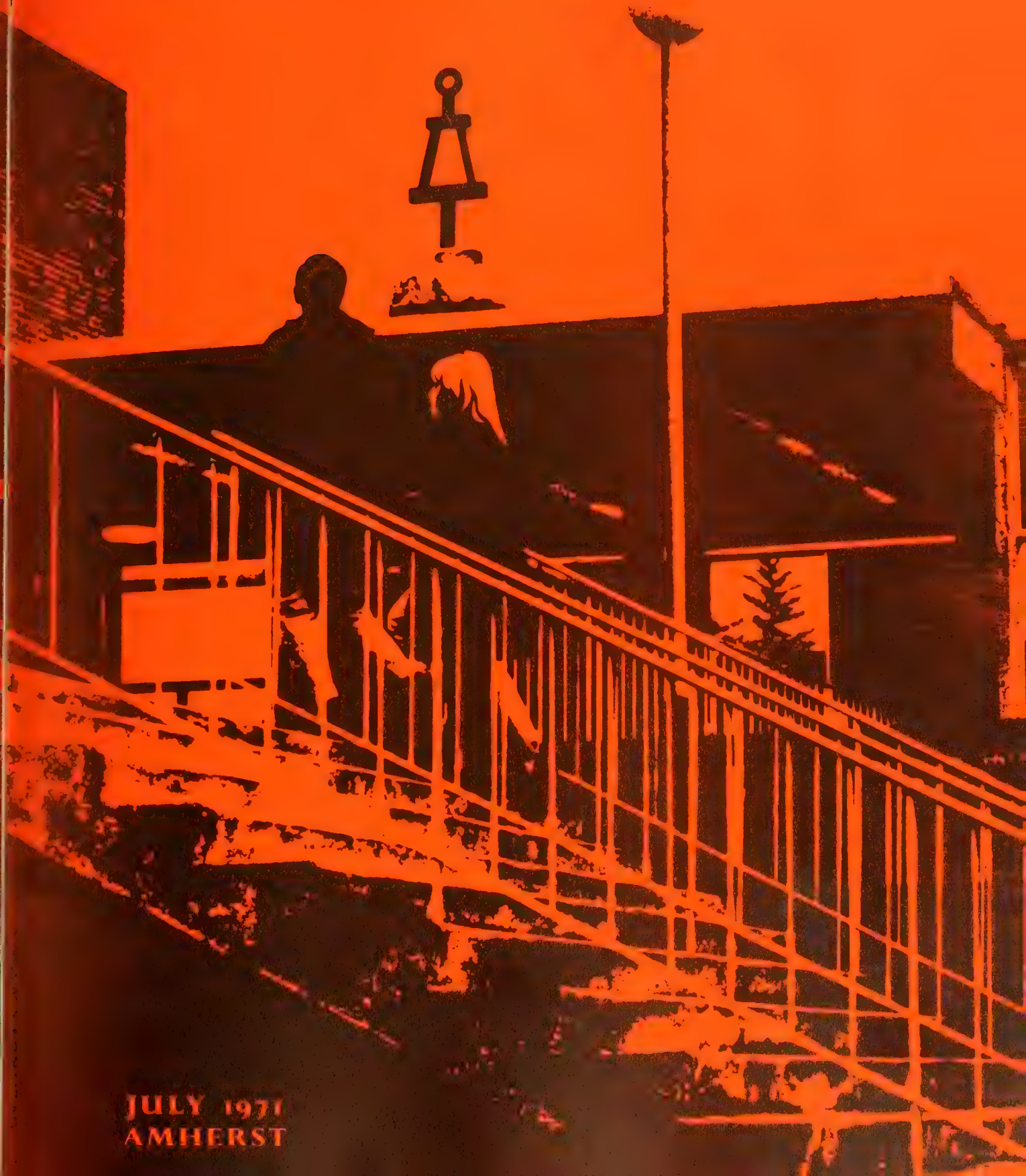
CHARGES: The Center makes no charge for any of its services to support instruction.

Dr. Raymond Wyman-Director

AUDIOVISUAL CENTER
UNIVERSITY OF MASSACHUSETTS
June 1971



1970-71 ANNUAL REPORT
SCHOOL OF ENGINEERING
UNIVERSITY OF MASSACHUSETTS



JULY 1971
AMHERST

ANNUAL REPORT

SCHOOL OF ENGINEERING

UNIVERSITY OF MASSACHUSETTS

1970-71

I Introduction

The statistical data requested by the Secretary of the University has been placed in the appendices as follows:

Appendix I	-	Appropriation Data
Appendix II	-	Personnel Data and Organization Chart
Appendix III	-	Students Served
Appendix IV	-	Professional Activities of the Faculty

As in years past, the format of this report contains accomplishments of the School, faculty recognition, planning, and finally, problems of concern to the School.

II Accomplishments

The most gratifying development during the past year was the organization of the Faculty Forum and the concomitant organization of Faculty committees to study problems of significance to the School of Engineering. Professor Charles E. Hutchinson was elected the first moderator of the Forum and carried this new role with energy and dedication. The School is most appreciative of this important work.

Associated with the organization of the Faculty Forum is what is viewed to be a sense of coming together by the faculty members in the various departments to form an integrated team that seems to work extremely well together. After a period of rapid growth and intense competition for limited resources, it is gratifying to observe diverse faculty participation in School-wide programs such as ocean engineering, environmental engineering, materials, bioengineering and manufacturing engineering. By pooling our limited resources and avoiding duplication of effort as much as possible, the School can mount new programs of importance to the State and the Nation.

A review of the activities of individual faculty members in the School reveals that the School is now developing significant national visibility. Faculty members are serving on important federal government committees as well as assuming positions of great importance in their professional societies. Three technical journals are edited in the School which is significant considering the relatively small size of the Faculty. One can easily predict that this enhanced visibility will result in greater outside support for the activities of the School.

The Dean of the School has been challenged by a new assignment to assist the Government of Singapore in building a new physical plant and to offer guidance on strengthening the Faculty and Curricula in engineering. We have been pleased to host the Dean of Engineering and the Head of Electrical Engineering from the University of Singapore for three weeks. They were much impressed with the School and the dramatic growth it has had in the past five years. At the time of writing this report a young lecturer from the Department of Electrical Engineering is visiting Professor Robert Glorioso to learn how to put together a modern computing engineering laboratory. Dr. Wogrin of the University Computing Center will serve as a consultant to the Government of Singapore on their computing center and the curriculum in computing science. It is hoped that other members of the Faculty will be able to offer similar services in the future.

1. Undergraduate Program

The School of Engineering hopes to offer its students a new experience in residential living by creating a voluntary arrangement for its freshmen students to live in areas designated for engineering students. Four suites in the new Cashin House Dormitory were set aside for freshmen engineering students in the spring semester 1971. The students who have lived in these suites have been extremely pleased with the arrangement and have encouraged us to add additional space next year. In 1971-72 the two top floors of McNamara dormitory will be reserved for engineering students desiring to live together. Faculty members have been dropping by on an informal basis and getting to know students in a new environment. It is planned to add tutorial assistance in these dorms in the coming year.

The freshman engineering academic course, Engineering 103 and 104, has been modified to a modular basis for instruction and laboratory work. The course stresses computer use for two-thirds of one semester, making use of the excellent university computer time-sharing system. The remaining one and one-third semester's work can be taken in four electives which are offered by the five engineering departments.

Students have 44 elective modules to choose from during the year. All modules are taught by people of professorial rank. Both the faculty and students are rather enthusiastic about the courses and it is felt the students are gaining a much better perspective of engineering than freshmen at other institutions. It is hoped a by-product of the course will be increased retention of students in engineering.

The undergraduate advising program within the School of Engineering was strengthened significantly during the past year under Dean Ward's leadership. Over eighty-five percent of the Faculty are involved in undergraduate student advising and the remainder are working with graduate students. During the coming summer no more than ten freshmen students will be assigned to an advisor within the area of their choice. The advisor will work with his group of students throughout the 1971-72 academic year. All students are asked to see their advisor for pre-registration course changes resulting in fewer problems with course overloads, underloads and few requests for W, WP's and Incompletes.

Civil Engineering has introduced a new course "Measurements and Analysis" that requires considerable trial and error experimentation in instructional techniques. The new fluid mechanics laboratory has greatly improved capability for instruction and research in the areas of fluid mechanics, hydraulics and ocean engineering. The basic undergraduate course in fluids has been redesigned to provide a stimulating and more useful introduction to experimental fluid mechanics. The Civil Engineering Faculty are experimenting with project courses with some success. For example, students have analyzed the proposed Alaska Pipeline as an engineering project in terms of engineering design, ecology, economics and social effects.

The Student Chapter of American Society for Civil Engineering has won its ninth Certificate of Commendation. Very few other Student Chapters can match this large number of awards.

The first year under the new undergraduate curriculum in Electrical Engineering has been completed. The Senior Projects Laboratories appear to be working quite well. Most students were enthusiastic and some excellent creative work was done.

The Department of Industrial Engineering and Operations Research has surveyed past graduates to seek their input on curriculum design. Preliminary returns indicate that the undergraduate educational program is effective.

The Department of Mechanical and Aerospace Engineering is modifying its existing curriculum which will not only allow but also require students to plan their own program with more freedom and flexibility than in the past. The Senior Design Project Course continues to be a source of satisfaction. One student undertook to have several pieces of equipment designed in last year's course for the Belchertown State School translated into actual hardware. The completed projects were delivered to the School this spring. This year's course centered around four projects obtained with the cooperation of a local doctor and the Cooley Dickinson Hospital.

Professor William Goss has done an excellent job this year of initiating a new interdisciplinary course entitled, "Science, Technology, and Society". The course was jointly sponsored by MAE, Environmental Science, and Psychology. Professor Goss' capable and patient effort are a model of how interdisciplinary problems can be overcome in these efforts. The course was a great success and should become a regular offering.

COMTECH has undertaken an emergency support effort on behalf of job placement for graduating engineers, Class of 1971. At least 20% of the class has failed to achieve future plans - graduate school, service, or employment. In addition to the establishment of a company directory resource room for the selection of job campaign lists, COMTECH offers graduates resume preparation and transmittal counseling services. A gross mailing to 6000 contacts in industry will carry briefs on all students wishing to be included, in an effort to uncover job opportunities. Other devices will be undertaken over the summer, insofar as possible.

2. Graduate Programs

The graduate student enrollment increase that was predicted last year happily came about as predicted with our 1970-71 enrollment going to 350 students. Once again we are encouraged with the prospects for the fall of 1971. It appears that another substantial increase will occur. Support of graduate students is now the limiting factor since applications from excellent candidates are now being received in substantial numbers.

It is gratifying to learn that many of our departments are now competing with the top ten schools listed in the revised Carter Report for students. Our location is a definite asset in recruiting but the important factor is the quality of the Faculty and the resultant national visibility.

Although most of the graduate degree holders have been placed, it is clear that the kind of person industry and government are now seeking has changed. There continues to be some need for basic research-oriented people but the major need is for problem solving oriented people. A Faculty Committee is studying the desirability of introducing a parallel graduate degree program such as a Master of Engineering or a Doctor of Engineering to be awarded by the Engineering Faculty. It is rather clear to the writer that most engineering schools will ultimately move in this direction; it is only a question of when. It is hoped that the University of Massachusetts will be one of the leaders in this new sense of direction.

Two new programs are being discussed by faculty groups. A proposal to establish a graduate program in Bio-engineering was received by the writer in early June, 1971. Another group is considering the establishment of a manufacturing engineering program between the Departments of Mechanical and Aerospace Engineering and Industrial Engineering and Operations Research. The job success of students receiving limited training in the area of manufacturing engineering is ample reason to begin such a program. But of equal importance is the need to produce such people to move into New England industry to increase their international and national competitive stance.

The Chemical Engineering graduate program continues to grow in the terms of both quality and to a lesser extent, quantity. They have been extremely successful in obtaining high quality U. S. graduate students from an ever increasing diversity of schools and backgrounds. Last September they had 42 full time graduate students and approximately 30 part-time students. This fall they are bringing in 12 new graduate students, and we will have about 45 full-time and 30 part-time students. Also for the first time, they have a graduate student coming who is bringing his own financial support in the form of an NSF fellowship. The department has been reasonably successful in securing financial support for graduate students from a wide variety of sources, and they expect to be able to continue to match their needs. In particular, their industrial support continues to grow due in large measure to the hard work put in by Dr. Eldridge in describing their program and philosophy to various industrial firms.

The Civil Engineering Department reports that the first five-year Water Supply and Pollution Control Training Grant ended at the beginning of this year with a total budget of $192,000. It has been replaced by another five-year training grant. During the life of the first grant the number of faculty in EVE increased from one to six, and MS and PhD degree programs were approved by the Trustees. Of the 22 graduate students who were supported by the grant, 17 received MS degrees and are employed in Government, consulting, or industry; two are working for PhD's, one was drafted, and two left due to academic difficulties.

During the current year the first three PhD's in EVE were completed.

One of the EVE graduate students is a member of the Five-College Campus Communities Committee formed to deal with the $25,000 grant made by John D. Rockefeller III, for student studies of ecological problems of the Connecticut River Basin.

The Structural Mechanics Laboratory (primarily for graduate study and for research) has experienced significant progress during the past year. This includes the activation of electronic equipment for shaking models of structures, development of methods to vacuum-form thin shell models, and improvement in facilities to apply hydrostatic pressure to models.

The graduate student enrollment in the Electrical Engineering Department was increased to 52 students only ten of which had undergraduate degrees from this University. Thirteen took the PhD qualifying examination, and ten passed. The other three will complete their MS work and then leave. Two PhD degrees were completed during the year.

A total of five PhD's have been awarded in the Department of Industrial Engineering and Operations Research with four of these occurring during the past fiscal year. Placement of these graduates is in industry, government laboratories, and in teaching. The Master's degree candidates have obtained positions in a variety of organizations. One student is going with the Environmental Protection Agency. Job offers to the Master's students have been good and in a variety of organizations including a government research laboratory, a national bank, and with a crime prevention unit.

Last year our first doctoral students in Mechanical and Aerospace Engineering were graduated and this year four students completed their doctoral degree work. The quality of the students and their work is excellent.

A number of minor changes in the graduate program regulations and course offerings in Mechanical and Aerospace Engineering were developed and agreed to. The language requirement was dropped, changes were made in the nature of the qualifying examination, and course offerings were streamlined to confirm to the realities of our present and anticipated graduate enrollment.

3. Research

A pattern for growth in sponsored research in the School seems to be developing. For each of the past four years the growth is running about $200,000 annually. For 1970-71, total sponsored research and training in the School should be about 1.4 million dollars. The School is very proud of the growth in outside support particularly when one reflects on the cutbacks occurring in federal support throughout the land. The fact that sponsored research continues to grow is additional evidence of the improved natural visibility of the School resulting from a dynamic, capable and hard-working faculty. In the section on the problems of the School comment will be given on the need to support a faculty as productive as that which exists in the School of Engineering.

Comment has been made on Project THEMIS for each of the past three years. The Project was the first major support received by the School and has been of great assistance in building the research and graduate programs in most departments. The Office of Naval Research continues to fund the work on deep-sea submersibles (next year at $120,000) but the title, Project THEMIS, no longer applies. The faculty group participating in this research had expected the level of funding to decrease to about $60,000 annually. However, it now appears that the level may be between 80 and 100 thousand dollars.

The excellent work done by Professor William E. Heronemus in assembling thirty faculty members from the Schools of Business Administration and Engineering and the Department of Physics to put together an outstanding proposal to study the feasibility of pollution free energy sources should be mentioned even though it is uncertain as to whether the proposed work will be supported. The important point to note is that faculty groups of diverse disciplines can work together in an atmosphere of mutual respect and trust if a minimum amount of administrative interference takes place. The role of administration should be to support such groups to the maximum extent and to provide as much encouragement as possible. Associate Dean Lester Van Atta, in this spirit, serves as staff to the faculty group which developed the proposal.

Each year one department in the School that made significant progress in sponsored research has been singled out. The Department of Electrical Engineering has made significant progress this past year and their efforts should be recognized.

The new Computer Engineering Laboratory under the direction of Professor Robert Glorioso was in operation for the first time this year. Equipment deliveries took place weekly and were immediately incorporated into the laboratory program. The laboratory is now equipped with a PDP-11/20 digital computer with several pieces of input-output equipment including a means of connecting student built lab projects directly into the computer. Students are now using the latest integrated circuits in their work. Most of the senior laboratory projects this year were used as a means for developing the laboratory facilities. Some projects were: a general purpose teletype interface for use with lab breadboards and the PDP-11, a peripheral controller for a graphical display for the PDP-11 and a four channel Digital to Analog converter for the PDP-11. All of these projects have been carried from initial problem specification, through design and development, printed circuit layout and construction, to final wiring and check out. This was possible because of the new printed circuit facility which was developed in the department -- which includes lay-out material, photo reduction support, board exposure, developing and etching equipment. Graduate work in the computer engineering area has been started by two graduate students who are looking into the problems associated with coupling computers in an interactive computer network. A third student has completed a Master's thesis in which a general technique for pattern recognition on a small computer was explored.

A PDP-15/20 Computer System with a VT-15 Graphic Processor was installed as a major, stand-alone computer graphics facility in the Joint Computer Laboratory. Two senior and two Master's projects are currently in progress under direction of Professor Imsong Lee. The projects include Interactive Facial Recognition System, Educational Computer Animation, On-line Graphical Specification of Computational Procedures, and Design of Host-Satellite Remote Graphic System.

A computer graphics terminal, Tektronik T4002 which was on loan to the Joint Computer Laboratory was formally purchased by the School of Engineering. Several projects are in progress including beam bending, fluid flow and transportation network projects from Civil Engineering; kinematics and mechanism from Mechanical and Aerospace Engineering; elementary circuit and signal analysis from Electrical Engineering; and computer graphics experiments from the Computer and Information Science Department.

The primary research effort of Professor Lewis Franks and his graduate students in the communications area has been directed toward the mathematical modeling of cyclostationary random processes as found in scanned-data or sampled-data communication and control systems, as well as certain biological systems. The goal is to find efficient means for the estimation and detection of signals of this type. Related research effort is directed towards new implementation approaches for N-path filters.

A Senior Communication Projects Laboratory under the direction of Professors Lewis Franks and Francis Hill has been established. Students have selected a variety of projects dealing with modulation and signal processing principles. The projects have been summarized by student prepared video tape presentations for the benefit of future participants.

Research in the Speech Communications Laboratory under the direction of Professor Ian Thomas has been concerned with the development and clinical evaluation of prosthetic aids for the deaf, speech recognition by computer, the enhancement of speech intelligibility in noise, and the investigation of temporal and memory factors in auditory perception.

A ruby traveling-wave maser for 1.3 cm wavelength, designed by Professor Sigfrid Yngvesson have dealt with microwave integrated circuits and an 8 mm. wavelength radiometer.

Professor Robert McIntosh is leading a group consisting of a research associate, Dr. S. E. El-Khamy, and seven graduate students. The group is presently considering the propagation of transient electromagnetic signals through dispersive media. In particular, theoretical and experimental investigations of the effects that media nonlinearities and inhomogeneities have on the transmission of these signals are being carried out. Consideration is also being given to the distortion of transient signals by a random propagation medium. The group's activities are partially supported by the Air Force Office of Scientific Research, the Army Research Office - Durham and the National Science Foundation.

A total of nine seniors participated in various project laboratories and research programs with Professor David Navon this past year. The studies can be broken down into three categories:

1) Thin-Film Semiconductors
2) Liquid Crystals
3) Semi-conductor Devices

Research was performed on the thin-film deposition onto glass substrates of gallium arsenide, by reacting arsenic trichloride and gallium in the presence of hydrogen. The parameters affecting the structural and electrical characteristics of these films were investigated. The utility of liquid crystals in producing numerical read-out devices was studied.

Schemes were investigated using both cholesteric and nematic liquid crystals to create 7-segment digital read-out devices. In addition, some of the basic optical and dielectric properties of the liquid crystal MBBA were measured. The high frequency limitation of a transistor invertor utilizing two silicon power transistors was studied. Also a scheme for voice modulation of a gallium arsenide laser diode was researched in an attempt to transmit intelligence via an infra-red laser beam.

An experimental and theoretical study of the acoustic and magnetic losses of yttrium-iron garnet is in progress under the direction of Professor Darrell Jackson. The data obtained from this study should provide information useful for the design of microwave acoustic devices using magnetic materials. Signal processing by microwave acoustic techniques is also under study. Devices for bandwidth compression and nonlinear filtering have been tested. Theoretical estimates of signal distortion have been made for some of these techniques and indicate that useful bandwidth savings and interference rejection can be achieved. One senior has been working on a microminiature microwave filter circuit. This work involved the design, construction, and testing of a magnetically-tunable bandpass filter using the yttrium-iron garnet magnetic material.

In Professor Donald Scott's Bio-medical Engineering group several seniors have been involved in two projects: a) building and testing an electro-encephalographic amplifier, and b) to formulating a disease vs. sympton probability matrix for automated electrocardiographic analysis.

Graduate student research with Professor Richard Monopoli continued in the areas of stability of pulse frequency modulated control systems, design of adaptive control systems, and model reference control of deep submergence vehicles. The first two areas are supported by a NASA Grant and the last by an ONR research contract (formerly THEMIS). Eleven seniors did projects in control. These ranged from analog simulation of model reference control systems to experimental projects such as control of inverted pendulum and an automatic station seeking antenna system.

Research on Estimation Theory and Stochastic Processes was carried out by Professor Charles E. Hutchinson. The specific area of interest in Stochastic Processes centered on the problem of calculating the first passage time of the processes encountered in pulse frequency modulation.

A theoretical study of wave propagation in inhomogeneous magnetoplasmas was conducted by Professor Ting-wei Tang and a graduate student. A theory has been developed to account for the effect of plasma inhomogeneities on the propagation of electromagnetic waves in hot magnetoplasmas. An experimental investigation of harmonic generation by nonlinear effects in a magnetized plasma column was also initiated by a graduate student. The project was supported by a grant from the National Science Foundation.

An interdisciplinary research project on "Studies of A Catalytic Reactor Using an Immobilized Multi Enzyme System", was funded this year by NSF. The principal investigators are Drs. James Kittrell and Robert Laurence of Chemical Engineering and Dr. Hultin, Professor of Food Science and Technology. This project represents a pooling of the resources and talents of two separate departments in two different schools of the University to undertake research in a new and emerging area of considerable national interest as evidenced by the support RANN of NSF has available for enzyme engineering research.

Additional grants to the Department of Chemical Engineering will likely be made to Dr. James Kittrell for work on catalysis applied to pollution control and to Dr. Marcel Vanpee for work on combustion.

The level of research support in Civil Engineering increased from about $530,000 in 1969-70 to nearly $650,000 in 1970-71. A very significant event during the past year has been the establishment of the New England Consortium on Air Pollution. Much of the credit for this is due to Dr. Tsuan Feng of the Department of Civil Engineering who served as the University of Massachusetts representative on its Board of Directors until April when he resigned on account of his approaching sabbatical leave, and was replaced by Dr. James Halitsky.

Another important accomplishment has been the setting up of pilot plant facilities in EVE for experimenting with wastewater treatment processes. These include various biological treatment units of 10,000 gal/day capacity, a gas-stripping unit, and a mobile laboratory. The equipment, with a value of more than $100,000 was transferred to the University by the State Division of Water Pollution Control. In addition, a 1500 square feet laboratory building is being constructed at the site at a cost of $30,000 of which $12,000 was furnished by the Provost's Office. This pilot plant facility is probably unique among universities and will be of tremendous value in our research and training grant proposals to government and industry.

Continuous recording air pollution and turbulence monitoring equipment is being installed on the roof of Marston Hall.

Close cooperation with the Geology Department in the area of Coastal Zone Management has already resulted in three joint proposals for research support to State agencies and to NSF. The persons directly involved are Dr. Joseph M. Colonell of Civil Engineering and Dr. Miles O. Hayes, Director of the Coastal Research Center of the Geology Department. (These proposals are under consideration at the time of writing this report.)

Research in the Department of Industrial Engineering and Operations Research has worked in separate but related areas as follows:

a) Techniques for choosing the optimal location and size of treatment plants
b) Techniques for determining how best to space effluent discharge into a river
c) Techniques for determining the optimal path for pipelines
d) Methods for allocating the costs of a regional system of participating communities

One paper has been presented at a professional meeting, another published and another submitted. By August 1971, all work will be completed. Work is now proceeding on developing working relationships with various planning agencies toward the goal of obtaining a demonstration grant where the techniques developed will be used on actual planning problems.

Work with the Albany Medical College continues with a formal presentation and written report submitted to the Department of Community and Preventive Medicine at the Albany Medical College during the recent academic year. This report concerned planning methodology and described possible quantitative methods that would have potential use in the planning and operations of the urban medical health care system under the Albany Medical College.

Several simulation runs have been completed and results provided to the Albany Medical College. These simulation runs help to predict and evaluate the resource requirements necessary to operate the health care clinic in the urban test area currently studied by the Albany Medical College. Work should continue at a more rapid rate during the summer.

Research proposals have been submitted in the health care systems area and in the human factors area but funding information is not available at this time. The health care systems proposal was entitled, "Design and Evaluation Methodology for Outpatient Systems"and the human factors proposal was entitled, "Travel in Nursing Units".

Although not supported, research activities within the department are rather extensive. One graduate student, working on his Master's degree thesis, is providing direct assistance to a group of communities concerned with regional solid waste disposal problem. This is located in the Bernardston-Gill area. A significant amount of activity is occurring at the University of Massachusetts Infirmary where a project is being undertaken to provide a more effective appointment scheduling procedure. This procedure will help smooth the appointment workload at the Infirmary and in turn provide less waiting time for students. This project includes a CRT matrix display of the appointments and schedules for the week within the Infirmary.

An ambulance locater simulator was developed by two of our faculty for possible applications in the Springfield, Massachusetts area. A paper has been given earlier on this topic. Some work has been done with the Springfield Hospital Medical Center in the Riverview Housing Clinic.

Several models have been developed to describe the quality of river water in a river that is subjected to effluent discharge by homes and cities. This work concerns primarily prediction of oxygen concentration in a river. The models prepared so far are helpful in determining the optimal location of sewage discharge into rivers such as the Connecticut River.

Some preliminary research activities have also occurred in the Human Factors area but primarily limited to the kind of research that is useful in developing skills and interest for more extensive studies. This work could lead into Masters' theses or doctoral dissertations. Many original research studies have been replicated within our laboratory and on several occasions equipment has been used by our people at the School of Physical Education.

Again in the unsupported area, some work has been done on information handling systems and in particular an automated mailing program and a name retrieval file have been completed. These provide mailing

lists on a selective basis from input criteria defined by the user of the mailing list. A similar program provides the names of individuals within the population file that have criteria needed or specified by the user of the system.

Although the Department of Industrial Engineering and Operations Research has been under some pressure by the Office of the Dean to increase their level of sponsored research, the past year has seen great activity by that faculty. Excellent proposals have been prepared and it is hoped that some will be funded. In any event, their activity and hard work should be noted as a task well done.

The research effort in the Department of Mechanical and Aerospace Engineering in the area of pollution/energy received a boost this year in the form of a three-year $142,000 HEW grant to Professors Jon McGowan, Lawrence Ambs and G. Albert Russell for the study of vehicle emission control. The research effort in manufacturing and production engineering centering around Professor Geoffrey Boothroyd, including Professors Corrado Poli and Lawrence Murch, continues to be our most productive area. Other supported research includes Professor Robert Kirchhoff's work in dielectrophoretic fluids, Professor William Goss' project in transportation. Professor John Ritter's work in the strength of glass, the towing research conducted by Professors Corrado Poli and Duane Cromack, Professor Ramani Mani's work in aerodynamic noise, and Professor Cromack's project on underwater drag. Other active research projects in the Department include Professor Carl Nelson's work on materials under high pressure, Professor G. Albert Russell's work in underwater acoustics, Professor George Zinsmeister's work in heat transfer in composite materials, Professor Lawrence Ambs' work in combustion, and Professor John Fillo's work in theoretical fluid mechanics. A number of research proposals have been submitted by these and other faculty members and are still pending a decision.

Of major importance is the development of a manufacturing and production engineering laboratory in the basement of the Engineering Laboratory Building. The laboratory is equipped partly with facilities from a National Science Foundation grant to Dr. Geoffrey Boothroyd. It should serve as a model for the development of other laboratories in the Department. A major addition to this laboratory ths year was a gift from the Van Norman Machine Company in Springfield of a numerically controlled milling machine. Dr. Boothroyd deserves commendation for his efforts in obtaining this machine and for developing the total laboratory facility.

4. Relations with High Schools and Community Colleges

The programs the School has developed to maintain good relationships with the high schools and community colleges of the State suffered somewhat the past two years due to the absence of Associate Dean Marcus who was on special duty for the University. He and Assistant Dean Ward did continue their efforts but both on a limited basis. With Dean Marcus' return to the School greater effort can be anticipated.

On April 1 and 2, 1971 the New England Junior Science and Humanities Symposium was held at the University of Massachusetts. The Symposium was directed by Dean Marcus and Dean Ward. Tau Beta Pi, the Engineering Honorary society, participated in planning and conducting the Conference. Thirty-nine high schools from Massachusetts and Rhode Island were represented and the total Symposium attendance was 137 students. From this Symposium six final students were selected to attend the National Junior Science and Humanities Symposium which was held at West Point.

In the fall of 1970, representatives from the Community Colleges and technical institutes in the State of Massachusetts were invited to the University of Massachusetts for a one-day meeting. Discussions were held regarding the curricula changes within the School of Engineering and the departmental representatives discussed the curriculum changes within their departments.

A revised brochure on curricula has been prepared and distributed to the community colleges to keep them informed of changes within course content for freshman, sophomore and junior courses at the University of Massachusetts. Each semester the community colleges are informed of the progress of their students toward a degree at UMass.

A Community College Committee has been formed within the School of Engineering to work with the Dean's Office and the community colleges in aiding transfer students from community colleges and technical institutes to the University of Massachusetts.

Dean Joseph Marcus and Dr. Howard Segool intend to give increased attention to a study of closed circuit TV use in continuing education and to serve high schools and community colleges in the State.

Dr. James Kittrell is actively engaged in improving the Chemical Engineering Department's contacts with potential engineering students and with the faculty of the State junior colleges. This task will hopefully be broadened in scope to include contacts between the Chemical Engineering Department and the School of Engineering and high school students within the state.

Project EPIC: During the week of 7-11 December 1970 Professors Francis DiGiano and Donald D. Adrian of the Department of Civil Engineering presented a short course on air pollution to members of the Westfield High School Faculty. (A similar program was given the previous year.)

Dr. Roscoe Ward is a member of the Environmental Technician Advisory Board for Springfield Technical-Commercial College.

Engineers for the Environment (primarily a graduate student group) have conducted tours through the EVE Laboratories for local high school students while discussing their research and answering questions on ecology and other topics. The response and interest have been so great that an open house to coincide with local ecological activities this summer is under consideration.

Thanks to the efforts of Professor Duane Cromack, the AIAA Regional Student Conference was held here this year with 120 attendees. Two of our graduate students, Richard Burbank and Arnold Manaker, assisted Professor Cromack in organizing the Conference. Two MAE students, John Barnoski and Norman Silverman, won prizes for their papers. (Also, Paul Sturgis won a prize for his paper in an ASME student competition during the year.)

5. Relations with Alumni

The Engineering Alumni Association completed its second year of operation with mixed success. Approximately 351 engineering graduates enrolled as members but the annual solicitation for scholarship funds raised about $1904 which is about the level of previous years.

The nucleus of alumni members who formed the organization are continuing their activities into the third year, but this past year they focused their efforts in a smaller geographic area rather than attempting to coordinate a more wide-spread organization with the corresponding logistics' problem.

This is a serious, hard-working, devoted group which will continue to be encouraged. They recognize now, as they did not two years ago, that developing enthusiastic alumni response for this kind of organization is a slow process with most of the work carried out by a few. Dean Marcus hopes to give the Engineering Alumni Association more of his attention when he returns to the School.

One of the high points of the year was a Symposium run by the Engineering Alumni Association in Springfield in November of 1970. Engineering faculty members served as a panel to discuss environmental problems and their solutions. At least one hundred people including many who are not alumni attended the Symposium.

6. Service to Industry

a) COMTECH - Industrial Liaison and Technology Transfer

A curtailed technology transfer program was operated under the State Technical Services Act using residual federal and state funds appropriated in FY69 extended through June 30, 1971. The COMTECH Referral Center was established at the School by transfer from Worcester Polytechnic Institute in order to reduce costs. The Field Liaison Service was reduced to 45% of its prior activity to reduce costs, the remaining cost being absorbed in a collaborative activity with the Division of Continuing Education. Basic publications and radio broadcasts by the Communications Service have been continued, but special state-of-the-art surveys and pbulications have been discontinued. The Technical Guidance Center for Industrial Environmental Control has been successfully transferred to the Cooperative Extension Service, College of Agriculture and will continue with a probable broader base of support.

The year has been a critical one for Massachusetts industry due partly to Federal contract cancellations or reductions with high technology firms along Route 128. Traditional industries, notably footwear and needle trades, have gotten into a crisis situation primarily due to foreign import competition. Environmental issues have also become more prominent as both industrial and municipal problems, and COMTECH has become substantially involved through its Referral Service and through the Technical Guidance Center.

A conference of footwear manufacturing executives was produced on December 1, 1970, jointly with the American Footwear Manufacturers' Association and The New England Footwear Association. It was notably successful in focusing attention on the need for advanced productivity systems through automation and computer technology. USM Corporation was the principal resource. Professor Erskine Crossley was a guest of the conference, to introduce him to a broad acquaintance in the industry. An industry committee, as a result of the conference, is now working to develop and gain acceptance of "lasts with standards" as a first step to machine - related standardization.

The needle trades have received much attention, with little encouragement from the industry. It has been introduced to Quarter-master Corps and Commonwealth procurement needs and procedures, to get some volume business into the industry which will justify machine modernization and relieve severe unemployment problems in Southeastern Massachusetts. A Fusing Technology Workshop jointly sponsored with the Division of Continuing Education drew attendance from as far as Canada and Salt Lake City to learn the latest in sealable fabrication which can alter the manufacturing basics of the needle trades industry.

Funding proposals are at various stages of consideration by the Massachusetts Department of Commerce and Development, the Massachusetts Science and Technology Foundation and, under the auspices of the President's Office, the Bureau of the Budget, and the Senate Ways and Means Committee. There has been no success in gaining access to the University's regular budget request. The principal difficulty is not with the desirability of the COMTECH program but with fund availability and other priorities.

The twelve-man Massachusetts House delegation spearheaded by F. Bradford Morse, has taken the leadership in Congress to gain extension of P. L. 89-182, to gain much larger funding, and to expand the clientele to include municipalities as well as industry. There is word that STSA is likely to fly again, but probably not before January, 1972. COMTECH is working with Morse's office. It is therefore considered critical to not dismantle the mechanisms COMTECH has going successfully. Survival funds are being sought to maintain basic operation beyond June 30, 1971.

b) Massachusetts Science and Technology Foundation

Chancellor Oswald Tippo and Dean Kenneth Picha serve as members of the Board of Governors of the Foundation. The Foundation has as its prime goal the creation of new jobs and industries in the State through the application of modern science and technology toward enhancing existing industries.

c) Public Service

Dr. Leigh Short of the Department of Chemical Engineering is a member of the National Air Pollution Research Grants Advisory Committee, Air Pollution Control Office, Environmental Protection Agency. This Committee has the responsibility to review and make funding recommendations on research proposals in all phases of air pollution, ranging from medicine and plant pathology, to chemistry, physics and engineering. Dr. Short was also appointed Chairman of the engineering panel of this Committee.

Dean Picha serves as Chairman of the National Air Pollution Control Manpower Development Committee, Air Pollution Control Office, Environmental Protection Agency. This Committee has the responsibility of reviewing all training policies and procedures in the Nation. In addition it recommends to EPA which university and technical institute training programs should be supported.

Dean Lester Van Atta has been assisting the Executive Secretary of the New England Consortium on Air Pollution Control in the carrying out of a study of manpower needs and jobs available in the area of air pollution control in industry throughout New England. His assistance in creating the new Consortium should also be noted.

d) Departmental Activity

The Department of Chemical Engineering is continuing its interest in, and support for industrial-oriented cooperative research programs, for both graduate and undergraduate students. Projects still underway, which were reported last year include those with Esso under Dr. Robert Lenz; with M.W. Kellogg, under Drs. John Eldridge and Leigh Short; with Kenics Corporation under Drs. Robert Laurence, Stanley Middleman and Robert Kirk; and with Monsanto under Dr. David Chappelear. Also, Dr. Robert Lenz will soon begin a cooperative project with Diamond Shamrock.

Faculty members in the Department of Chemical Engineering participated in the following short course presentations:

Robert S. Kirk
Participated in Third Annual Short Course in Water Quality Control, UMass, March 22-24, 1971

Robert W. Lenz
ACS Short Course, "Applied Polymer Science", Saddle Brook, New Jersey, February, 1971 (44 industrial chemists enrolled)

Two lectures in Short Course, "Fundamentals in Polymerization and Polymer Characterization" at University of Detroit, May, 1971

E. Ernest Lindsey
Director, Short Course, "Water Quality Control" UMass, March 22-24, 1971

James M. Douglas
Seminar presented at Union Carbide "Periodic Processing", October 12, 1970

Robert L. Laurence
Seminar presented at the Polymer Research Institute, "Polymer Research", May, 1971

Seminar presented at the Tennessee Eastman Company, "Instability in Flows with Viscous Heating", Jan., 1971

Robert W. Lenz
Lectured for PSE Special Course held at Hooker Chemical Company Research Laboratories, Niagara Falls, N.Y., June, 1970

Research seminar presented at Eastman Kodak Company Research Laboratories, Rochester, New York, June, 1970

Research seminar presented at Du Pont Company Experimental Station, Wilmington, Delaware, October, 1970

Research seminar presented at Tennessee Eastman Company Research Laboratories, Kingsport, Tennessee, March, 1971

Research seminar presented at Diamond Shamrock Company Research Laboratories, Painesville, Ohio, May, 1971

For the second year the Civil Engineering Department received an unrestricted gift of $5,000 from the Northeast Utilities Service Company.

On 8-10 July 1970 the Civil Engineering Department held a National Specialty Conference on Disinfection which was sponsored jointly by the University's Water Resources Research Center and the Sanitary Engineering Division, American Society of Civil Engineers. There were thirty-two scheduled speakers and one hundred and ten in attendance. Professor Tsuan Feng was general chairman and Professor Lawrence Kuzminski, the program chairman.

The III Annual Short Course on Water Quality Control, dealing with the combined treatment of domestic and industrial waste waters was conducted by the Civil Engineering Department on 22-24 March 1971. This was organized and conducted by a committee consisting of Professors Lindsey (Chairman), Adrian and DiGiano. There were twenty-one speakers, eight being UMass faculty. The attendance was about fifty.

An NSF Advanced Science Seminar in Earthquake Engineering was held by the Civil Engineering Department May 24-28 and June 7-11, 1971. The registered attendance for each session was about eighteen, including one scientist from Yugoslavia and one from Chile. Speakers included Professors F. E. Richart, Jr., and R. D. Woods of the University of Michigan, Robert Whitman of MIT, J. Lysmer of the University of California, Professor M. Shinozuka of Columbia University, and Merit P. White of UMass. Professors William Nash and Merit White were director and co-director, respectively.

By far the most exciting and rewarding event of the past year in the Department of Mechanical and Aerospace Engineering was the meeting of the Department's newly established Industrial Advisory Board held on campus on October 9 and 10, 1970. The Board is conceived as a mechanism for broadening and deepening the Department's communication with and input from members of the industrial and business community who are concerned about the education of engineers. Establishment of the Board is intended to begin a long range commitment by the Department to keep informed about and be responsive to the needs of their students as they are partly reflected by the needs of industry. The first meeting was judged a great success by all involved.

The work of Professor John Zahradnik, who holds a joint appointment with Agricultural Engineering, deserves considerable praise for its public service implications. Professor Zahradnik is working in the general area of aquacultural engineering and specifically with the shellfish industry in Southeastern Massachusetts. He has received support and cooperation from several towns in that area, has an active pilot plant in operation growing oysters, and has other projects in various stages of development.

III Faculty

The accomplishments listed above have brought great credit to the School of Engineering, but it must be remembered that the School is really its faculty and therefore recognition of the capability and hard work of the faculty must be given. The faculty has worked under difficult conditions this past year mainly due to reduced support budgets. That the faculty continued to be productive and attracted increased outside support is noteworthy under the circumstances. The writer expresses his gratitude to everyone in the School for their support and work.

The fine work and steadying influence of Associate Dean for Research Lester Van Atta is gratefully acknowledged. Dean Van Atta brings to the School a wealth of excellent research experience in government and industry and we are pleased he is with us.

Dean Joseph S. Marcus returns to the School full time next year and we welcome him back. His absence for the past two years resulted in reduced activity on many important fronts.

Dr. John R. Dixon, Head of the Department of Mechanical and Aerospace Engineering has asked that he be relieved of administrative responsibilities to return to full time teaching and research. The prgress made in improving the quality of the programs offered in Mechanical and Aerospace Engineering during the period of Dr. Dixon's leadership has been truly outstanding. We thank him for a job well done.

The following additions to the faculty will take place in the Fall of 1971:

<u>Civil Engineering Department</u>

Professor Paul W. Shuldiner, Dr. of Engrg., Highway Transportation Engineering, University of California, Berkeley

Assistant Professor Kenneth H. Stokoe, (Ph.D. expected) University of Michigan

Industrial Engineering Department

Associate Professor William J. Duffy (Ph.D. expected) University of Michigan

Assistant Professor Randall P. Sadowski (Ph.D. expected) Purdue University

Mechanical and Aerospace Engineering Department

Associate Professor William R. Wilson, Ph.D., The Queen's University of Belfast, Belfast, Northern Ireland

Assistant Professor Karl Jakus, Ph.D., University of California, Berkeley, California

The quality of new appointment continues to increase each year and we are indeed delighted to have these excellent people join us.

The Civil Engineering Department and the School of Engineering has been honored by the temporary addition of Professor Michal Zyczkowski as an NSF Senior Visiting Foreign Scientist in February, 1971. Professor Zyczkowski is a specialist in Engineering Mechanics, especially plasticity and the behavior of structures beyond the elastic limit.

Professor Robert R. Archer returned to the Civil Engineering Department in September, 1971 after holding an NIH Special Research Fellowship at MIT for two years.

Professor Alexander Chajes has been on sabbatical leave during the second semester 1970-71 while writing a text on Structural Stability for Prentice-Hall. Professor Chajes has just been elected to honorary membership in the Column Research Council.

Professor Denton B. Harris has been on leave during 1970-71 in order to complete the academic work for a Ph.D. at Texas A & M College. He expects to return to UMass in September, 1971.

Professor Karl N. Hendrickson has been on sabbatical leave during the second semester 1970-71. He spent this period visiting technical institutes and engineering projects in Ireland and the United Kingdom.

It is a serious loss to the Department of Mechanical and Aerospace Engineering that Dr. Ramani Mani has decided to return to a position at General Electric Company after this academic year. Dr. Mani, in his short stay with us, was a very real and very important addition to the Department, both professionally and personally. We are extremely sorry to lose him.

Professor Colin Moodie in the Department of Industrial Engineering and Operations Research returns to Purdue University after spending his sabbatical year with us. His stay with us was a good one from our point of view and we wish him well for the future.

Dr. Hiroshi Matsuo has completed his year of teaching in the Department of Industrial Engineering and Operations Research and has resigned to take another teaching position. We wish him well in his new post.

IV Planning

The writer chaired a discussion group last summer at a workshop entitled, "Social Directions for Technology", sponsored by the National Academy of Engineering. Represented at the workshop were engineers, scientists, humanists, and behavioral scientists from industry, government and the University. The discussion soon was focused on how Universities can structure themselves to work on the important problems facing our society. Some important people even questioned the visibility of the University as a problem-solving organization. It seems clear to the writer that the next decade will find groups in the US struggling with important social problems and it is hoped that the School of Engineering will be in forefront of these efforts.

As mentioned previously, a group of faculty are studying whether the M.S. and Ph.D. degrees should continue to receive the emphasis they have in the past. Other Schools of Engineering are considering similar questions with some moving rapidly toward professional graduate degrees in which the thesis is not basic research but rather applied problem solving at a sophisticated level. Such a reorientation will be difficult for those schools that have assembled a faculty of primarily basic researchers. Fortunately, the faculty of the School of Engineering here at UMass has much experience in government and industry and a change of emphasis can come about with only minor difficulty.

Last year the question of black students in the School of Engineering was also discussed. The School is committed to increasing the number of black students enrolled.

An excellent program to begin working with black high school students was developed by a highly qualified faculty group under the leadership of Professor John Ritter of the Mechanical and Aerospace Engineering Department. The program has been studied by several federal agencies and private foundations and has received much praise but no funding. It is hoped that funding will be available next summer to initiate the program.

Planning for the future promises to be much more difficult than in past years. It has become increasingly evident that the major thrust of the School's academic program will be at the graduate level. Enrollment at the graduate level has increased dramatically and greater increases are evident over the next decade, particularly if professional graduate programs are created. Since the University has the only publically supported doctoral programs in engineering, growth at the doctoral level is necessary. However, it must be remembered that the costs of graduate academic programs in engineering are extremely high. The faculty is doing its share in attracting outside support; but University funds are also needed for continued growth.

The undergraduate enrollments in engineering and the physical sciences are likely to decrease in absolute numbers for the next two or three years. It appears that the size of our freshman class will be down by twenty percent this fall, paralleling the situation throughout the land. It is lamentable that the press has emphasized the plight of unemployed scientists and engineers to the extent that young people are avoiding these areas in thinking about careers. The writer has studied manpower needs stated in the environmental agency reports of 1966-69 and totals of 75,000 engineers are stated as needed by 1975. With a similar number of unemployed scientists and engineers in 1975 one can easily indict government at state and national levels for not creating the jobs they predicted would exist. Clearly, the US has not learned how to effectively utilize its resources in technically-trained people with the result that the young will avoid these areas and drastic shortages will exist by 1975. These problems arise out of conditions beyond the control of the School and it is likely that we can do little about them. The onerous result in the School is that we are likely to have graduate enrollments almost equal to undergraduate enrollments by 1975-80 unless major changes take place in the highest levels of government. But, our planning has to assume that major changes will not occur and that undergraduate enrollments will not increase until a crisis situation once more exists.

Planning continues for the new engineering laboratory building but a major interruption resulted from the executive decision not to include working drawing funds in the FY'71 budget. This is a severe blow to the planning of the School since additional space will be absolutely required in FY'73. If prefabricated space is made available in FY'72 for the School, some of the problems will be ameliorated but our need for permanent, well-designed lab space is extremely urgent.

The considerable success of the Environmental Program -- a multi-discipline group of faculty mainly from within but also from outside the Department of Civil Engineering, collaborating in an area of great current social significance, has encouraged the Department to apply the same plan in other areas. One of these is Ocean Engineering which was organized about two years ago. It is hoped that developments in this area will resemble, although possibly with a longer time-scale, those that have occurred and are occurring in Environmental Engineering. There are two other areas where the Department is considering similar programs. One of these is Transportation Systems and Planning. The two present faculty members will be joined shortly by Dr. Paul Shuldiner whose experience and interest are in systems and planning. In addition, there are faculty in other departments -- Mechanical and Aerospace Engineering, Industrial Engineering, and Business Administration, who have expressed interest in cooperating with Dr. Shuldiner. Other Departments on the Campus will probably be interested, also. As regards the importance of transportation and the need for intelligent planning, there is no question. This is a field where the opportunities are infinite.

The field of Earthquake Engineering is another where some consideration of coordinated activity is underway. Three present members of the Civil Engineering faculty have a strong interest in the dynamics of structures. Professor Kenneth Stokoe, joining the Department in January, 1972 is very expert in soil dynamics. The economic significance of earthquake engineering at the present time is very great in those parts of the world where earthquakes are common. We are not in such a fortunate location from a laboratory point of view, to be sure, but the success of the two NSF Advanced Science Seminars that have been run by the Civil Engineering Department shows that interest exists even in our vicinity. We are, therefore, acquiring some reputation in this area.

V Problems

A list of problems confronting the School has been repeated in each of the past four annual reports and one regrets to say that not one has been resolved in the past five years. A listing of the problems, now five years without a solution, is as follows:

1) Space
2) Engineering Library -- a solution may be in sight
3) More outstanding students -- i.e., the stars
4) Non-professional upgrading or autonomy in non-professional salaries
5) Secretarial service
6) Charging grants for technician and secretarial salaries

To this list two new problem areas were added last year which were funding and categorization of State funds. Rather than progress in these two areas, the situation has become more critical than before. The School of Engineering actually received less support from the University this past year than it did the year before.

The School of Engineering will have an accreditation visit in the winter of 1972. The quality of the faculty and the curricula offered will be praised by the visiting team. We can expect to be severely criticized for our laboratories if we do not modernize and improve them before the visit. Again, the faculty has been extremely productive in attracting NSF support for purchase of undergraduate laboratory equipment. With the termination of the NSF program, more State funds will be needed for laboratory equipment.

In this past year of stringent funding, the Department of Chemical Engineering had much less than the needed support from State funds in the 10, 13 and 15 accounts, and as a result had to make up these deficiencies from their trust funds. Particularly distressing is the extreme shortage of supply money, relative to their needs, both for undergraduate and graduate instruction and research. It is extremely frustrating to expend a large amount of effort building up their trust fund via industrial sources, and then have to use the same fund to subsidize the 10, 13 and 15 accounts because of inadequate State funding. Thus, the Department needs substantially greater allotments in these areas.

The Department of Civil Engineering reports the following problems:

1) The statutory upper limit on University salaries: It seems very unfair that the limited number of exceptions to this limit are practically all used up for administrative appointments.

2) The highest clerical position in the Department is at Grade 7. This is not appropriate to the duties and responsibilities of the Department secretary.

3) There are only three State clerical positions to serve a Department of nearly thirty full-time faculty with an annual research budget of about $600,000. The Department badly needs more State service clerical staff.

4) During the past year the Department has had one Grade 8, Technical Assistant. This has been insufficient. The recent allocation of another Grade 8 position and a Grade 12, Technical Specialist, will be a great improvement. We shall be able to make good and full use of these men.

5) Space is a problem of ever increasing severity. The growth of the graduate program and of research activity, especially in Environmental Engineering, but also in other areas such as Transportation, Soil Mechanics, Hydraulics, Structures, to say nothing of the introduction of certain undergraduate programs such as Freshman Modules, sophomore and junior courses in measurements and in materials, demands more space than we dispose of. It is hoped that the approaching move of the Computing Center (permitting Mechanical and Aerospace Engineering to leave Marston Hall), the transfer of the Engineering Library from Marston Hall, and the move of WMUA from the basement of Marston Hall will give some relief, at least for a time.

6) Paper: The flood of paper that departmental administrators most cope with is astronomical. Much of this effort seems to be of uncertain value.

The first year's operation of the Department of Electrical Engineering under a Chairmanship rather than a Headship has just been completed. This has been a trying experience for both the Department Chairman and the faculty. In retrospect it appears that most of the problems have occurred because of a lack of clear definition of the division of the responsibility and authority between the Department Chairman and the faculty. Efforts will be made during the coming year to define these responsibilities and authorities with precision.

With a larger faculty and increasing activity, we have found that it was impossible to keep the telephone expenditures within the allocated money. Only with a 30 percent supplement from the Departmental Service Fund were we able to continue service at the normal level. The overage was caused not only by increased usage but also by the imposed surcharge for the "use" of the WATS lines. Continued experience has shown that the WATS lines are useless for us since they are always busy. Expenditures for in-state calls could have been eliminated if the WATS lines had been available.

The travel account also was supplemented by 36 percent from the Departmental Service Account. As more of their faculty obtain research grants each containing a travel allowance, they should expect that the burden on the state account will not be as great.

Their existing secretarial staff, with the assistance of two coeds, has been able to keep up with the office work load. However, with the departure of Mrs. Sumner and the THEMIS position and with no replacement in sight, we anticipate a real problem next year.

Student morale and student faculty relations within the Department have been better than usual during the past year. Faculty evaluation sheets were used by the students for all but one of the faculty, at the end of fall semester and at the end of spring semester. The results of the fall semester evaluation were published in the departmental student paper. The Student-Faculty Relations Committee was dropped last year because of expressed dissatisfaction from the student body itself. They felt that the student members of the committee were not functioning properly as a two-way channel of communication between the faculty and the student body. As a substitute they tried a larger "town meeting" type of communication with the students. They had three of these meetings during the year but with only moderate success because of low student attendance.

The Electrical Engineering Department continues to have problems getting applications through the graduate office bottleneck. Several of the best graduate applicants were lost because of unnecessary delays in the graduate office. The same problem existed last year and we had hoped that changes in the graduate office procedures would improve the situation.

With respect to laboratory space, the Electrical Engineering Department is beginning to feel the bind. They are presently using two ground-floor laboratories as classrooms. If the two regular classrooms on the second floor presently used by the Math Department could be returned to them, then they could return the two ground-floor rooms to their original laboratory function. As the number of teaching assistants and research assistants increase, they are finding a problem providing desk space for these assistants. The Electrical Engineering Department will be losing its Conference Room this summer and it needs such a room as other departments have.

The Department of Industrial Engineering and Operations Research indicates that its major problem concerns the development of a medium to long-range plan that would reflect the major thrust and interest of the department. These factors are difficult to define and should remain as broad as possible in order to provide the flexibility necessary for a dynamic department. The self-study to be conducted in the fall should provide an answer to this problem.

A second area of almost equal importance is the present need for a review of the undergraduate and graduate programs relative to low enrollment and to subject matter. There is a need to consider the kind of graduate that we should be turning out in terms of the needs of industry and society. We need to define more carefully the alternatives available to students that enter our program. The undergraduate program and all facets of it should be reviewed carefully.

The graduate program at the doctoral level needs to be properly monitored but no major thrust needs to occur in this area. The Master's program should be reviewed relative to the kind of graduate that is turned out of the department and his relationships to industry and society.

A third problem area of considerable importance is the need for a considerably larger allocation of funds in the equipment area. We are now making a major thrust into human factors and as such equipment is needed probably as early as spring of 1972 or fall of 1972.

The fourth problem area concerns the level of outside support. Several efforts have been made to obtain additional funding for research and which, in time, would benefit our students; however, the present situation nationally is such to make funding very difficult to obtain. A continual effort is needed in this area with emphasis on other sources.

The last major problem area is that of additional support for graduate students. It is somewhat redundant for a university to say that it provides a graduate program and then not provide support for students in these programs. It is necessary for the faculty to dilute their activities by having to obtain support (hopefully in their own area of interest) primarily for the support of graduate students. This is a very significant problem and is undoubtedly university-wide.

Funding has been minimal in several areas but the travel, equipment, and telephone support accounts have been inadequate. The department is actually operating at a very low cost when considered on a per student basis and when compared to other departments.

The number of graduate students in the Department of Mechanical and Aerospace Engineering continues to be a major problem. It is not a problem with a single dimension. It includes the problem of insufficient financial support, the need for much more comprehensive recruiting practices, and nation-wide problems associated with a declining market for advanced engineering degree holders and declining public support for science and engineering generally.

If the declining student interest in undergraduate education in Mechanical, Aerospace, and Materials Engineering continues, undergraduate enrollment will become an even more serious problem in the future than it is now. Again, the roots of this problem cannot be traced to a single point. Undergraduate motivation has been a growing problem in recent years. This year's graduating seniors in Mechanical and Aerospace Engineering encountered serious employment problems. The national anti-technology atmosphere is also a factor.

The Department of Mechanical and Aerospace Engineering has not succumbed to the form, structure, and negativism of the bureaucratic mentality as much as we have made a marriage of expedient convenience with it. So long as this is our approach, there is no hope for any fundamental solution. The principles of organization which might enable us to develop procedures that are flexible and responsive and changeable and cancellable are reasonably well-known, but essentially untried in the University.

A small pilot engineering cooperative work-study program was continued through the second semester, with major participation by Dr. Howard Segool and Professor Robert K. Patterson. A combined work-study proposal of the Schools of Engineering/Education/Business was coordinated by Dr. Segool for FY71 grant support from HEW, in parallel with a budget request to the University.

No University support was forthcoming, no significant support could be obtained from the School budget, and HEW total funding was less than one-sixth of the amount of grants requested. Most of the HEW funds were granted to institutions which had received planning grants in FY70. As a consequence, the University application, while commended by HEW, was not successful.

The Engineering work-study program, ambitiously conceived for strong field advisory participation by faculty, for aggressive high school recruitment into engineering, and for a much higher level of administrative supervision and much stronger placement efforts, has been phased out this Spring, with no new student recruitment planned.

VI Acknowledgments

The writer has been assigned the task of editing engineering school accreditation reports for the states west of Colorado. In addition he chaired teams visiting middlewestern institutions. And, despite the problems enumerated above it is my personal opinion that the University of Massachusetts/Amherst is the best academic institution with which one can be associated in the Nation. I know of no place I would rather be during these critical times for higher education. It is indeed a pleasure to work with a dynamic and understanding administration in a State that is increasing its commitment to public higher education rather than holding previous years' levels or, indeed, reducing expenditures. But, we cannot be complacent and we must continue to push for excellence to meet our responsibilities to those who are paying the bills.

For the fine attitude of my colleagues I am most grateful. The generous help and dedication of all of those in the School is deeply appreciated. The enthusiasm and cooperation from all to develop a School recognized throughout the Nation make the University a great and lively place to try to make one's contributions.

Special thanks again go to Mrs. Oretta Taylor and her Staff in the Office of the Dean for making the Dean's Office a happy and cheerful place to work.

Respectfully submitted,

K. G. Picha, Dean
School of Engineering

APPENDIX I

APPROPRIATION DATA

APPENDIX II

PERSONNEL & ORGANIZATION CHART

ORGANIZATION CHART

SCHOOL OF ENGINEERING

September, 1971

DEAN K.G. PICHA

Associate Dean Joseph Marcus

- Relations with Community Colleges
- Public Affairs
- Educational Technology

Associate Dean Lester Van Atta

- Research
- Relations with Federal Agencies

Dr. Howard Segool, Director, COMTECH

- STSA
- Industrial Liaison
- Cooperative Engineering Program
- Continuing Education

Assistant Dean Roscoe Ward

- Student Advising
- Scheduling
- Records
- Curricula

Dr. John Dixon
Head, MAE Dept.

Dr. Richard Trueswell
Head, IE Dept.

Dr. Dale Sheckels
Head, EE Dept.

Dr. John Eldridge
Head, ChE Dept.

Dr. Merit White
Head, CE Dept.

Engineering Research Institute

Interdisciplinary Research Labs

The following represents the breakdown by rank in each of the five Departments, excluding Deans:

	Ch. E.			C. E.			E. E.			I. E.			M. A. E.		
	68	69	70	68	69	70	68	69	70	68	69	70	68	69	70
Professors (including Heads)	6	7	8	10	10	10	5	7	7	2	3	3	10	8	7
Associate Professors	3	4	4	9	10	11	8	10	11	3	4	6	8	6	14
Assistant Professors	1	1	1	4	3	3	6	5	5	2	2*	1	5	8	4
Instructors														1	1
Adjunct Associate Professors	1	1	1				1	1						1	
Visiting Associate Professors				1	1					1		1		1	
Visiting Professors		1									1				

*One left at the end of the first semester.

The following table lists the total personnel (full-time equivalent) in the School of Engineering as of September, 1969:

	1968	1969	1970
Deans	3.5	3.5	3.0
Department Heads	5	5	5
Professors	35	35	36
Associate Professors	33	36	45
Assistant Professors	20	17	14
Instructors	1	1	1
Lecturers	2	0	0
Visiting Professors	1	2	0
Visiting Associate Professors	2.5	1	1

APPENDIX III

STUDENTS SERVED

STUDENT DATA

1 STUDENTS SERVED	Fall '68	Fall '69	Fall '70
1. Engineering School Totals			
(a) (i) Number of Undergraduate Majors	1004	1050	998
(ii) Number of Graduate Students	196	224	273
(b) Number of students taught	4053	3850	3273
2. Chemical Engineering			
(a) (i) Number of Undergraduate Majors	81	76	70
(ii) Number of Graduate Students	52	54	55
(b) Number of students taught	342	285	376
3. Civil Engineering			
(a) (i) Number of Undergraduate Majors	175	171	167
(ii) Number of Graduate Students	48	66	72
(b) Number of students taught	879	1209	882
4. Electrical Engineering			
(a) (i) Number of Undergraduate Majors	165	174	156
(ii) Number of Graduate Students	27	35	51
(b) Number of students taught	840	912	790
5. Industrial Engineering			
(a) (i) Number of Undergraduate Majors	68	73	59
(ii) Number of Graduate Students	24	30	45
(b) Number of students taught	211	372	355
6. Mechanical & Aerospace Engineering			
(a) (i) Number of Undergraduate Majors	192	222	174
(ii) Number of Graduate Students	45	39	50
(b) Number of students taught	1164	1072	870
7. Undesignated Engineering			
Basic and Unassigned			
(a) Number of Undergraduate Majors	323	328	372
(b) Number of students taught	617	*	*

*The Basic Engineering Department was dissolved prior to the Fall Semester 1969.

11 NUMBER OF DEGREES GRANTED	Sept. '68 to June '69	Sept. '69 to June '70	Sept. '70 to June '71
Bachelor of Science	161	199	164
Master of Science	65	47	57
Doctor of Philosophy	5	7	16
1. Chemical Engineering			
B.S.	20	22	22
M.S.	5	12	11
Ph.D.	2	3	3
2. Civil Engineering			
B.S.	42	44	31
M.S.	20	8	12
Ph.D.	3	2	3
3. Environmental Engineering			
B.S.	0	0	0
M.S.	0	7	2
Ph.D.	0	0	1
4. Electrical Engineering			
B.S.	37	41	45
M.S.	16	4	9
Ph.D.	0	1	2
5. Industrial Engineering			
B.S.	15	21	19
M.S.	9	1	11
Ph.D.	0	1	4
6. Mechanical Engineering			
B.S.	40	51	35
M.S.	15	15	12
Ph.D.	0	0	3
7. Aerospace Engineering			
B.S.	7	20	12
M.S.	0	0	0
Ph.D.	0	0	0

APPENDIX IV

PROFESSIONAL ACTIVITIES OF THE FACULTY

I Faculty Publications and Patents

i) Office of the Dean

K. G. Picha - "Engineering Education, USA--1970 to 1980", Institution of Engineers, Singapore Journal Volume 8, October-December, 1970

II Faculty Papers Presented

i) Office of the Dean

K. G. Picha - "Engineering Education, USA--1970 to 1980", Singapore Institution of Engineers, November, 1970

"Accreditation of Engineering Science Programs", Annual Meeting, ECPD, Cleveland, Ohio, October, 1970

"Education of Environmental Problem Solvers", invited paper, Western Electric Industry-University Seminar, March, 1971

H. D. Segool - Greater Holyoke Chamber of Commerce
Special Libraries Association
Annual Meeting, Massachusetts Society of Professional Engineers
Moderator, Footwear Manufacturing Executives Conference
Opening Remarks, Fusing Technology Workshop
Principal Address, Commencement, Franklin Institute of Boston

III Grants

i) K. G. Picha and C. E. Hutchinson

Office of Naval Research Support of Research on Deep Sea Submersibles, $180,000/year from 1967-73

ii) Joseph S. Marcus and Roscoe F. Ward

New England Junior Science and Humanities Symposium
U. S. Army Research Office, $6,500., Spring 1971

IV Consulting and Other Professional Activities

i) Dean's Office

K. G. Picha

Consultant NSF Student Oriented Program

Director and Secretary, ASEE Graduate Studies Division

ASEE Visiting Professor, Calvin College, Grand Rapids, Michigan

Massachusetts Association of Marine Sciences

Chairman, National Air Pollution Control Manpower Development Advisory Committee

ECPD, Engineering Education Accreditation Committee, Chairman, Region IV -- Chaired Three Visiting Teams, Elected Vice-Chairman, Operations, 1971

Chairman, Commission on Education for Engineering Profession, National Association of State Universities and Land Grant Colleges

Invited National Academy of Engineering Conference on Social Directions for Technology, July, 1970

Consultant, Government of Singapore

Director, Massachusetts Science and Technology Foundation

Director, Engineering College Administrative Council, ASEE

Director, Engineering College Research Council, ASEE

Invited Lecturer, Western Electric-University Seminar on Environment

Howard D. Segool, the COMTECH Director, served on the following committees:

Governor's Advisory Committee on Science and Technology

University Broadcast Council

Polymer Research Institute, Advisory Committee

Continuing Education
- Chairman, Program Subcommittee
- Chairman, Academic Degree Program Subcommittee

Institute for Man and His Environment
- Outreach Subcommittee

Massachusetts Rural Development Committee

Ad Hoc Advisory Committee to the Bureau of Solid Waste Disposal Mass. Dept. of Public Works, Chairman

Ad Hoc Committee, Commonwealth Program for Environmental Education, Chairman

Environmental Affairs Committee, Massachusetts Society of Professional Engineers

New England Council, Applications of Science and Technology Committee

(ii) Chemical Engineering Department

R. S. Kirk and T. P. Fidelle, Jr.
"A Study of Unidirectional vs. Tridirectional Heat Flux Models and the Effect of Particle Size on Heat Conduction in Composite Solids" (Accepted by AIChE Journal but not yet published).

J. R. Kittrell
"Mathematical Modeling of Chemical Reactions", Advances in Chemical Engineering, 8, 97 (1970)

J. R. Kittrell and B. S. Strangeland
"Jet Fuel Selectivity in Hydrocracking" (Accepted by IEC Process Design and Development but not yet published).

R. W. Lenz, Editor
Polymer Preprints, Vol. 11, No. 2, September 1970, Papers Presented at Chicago Meeting, x + 1101 pages.

R. W. Lenz, Editor
Polymer Preprints, Vol. 12, No. 1, March 1971, Papers Presented at Los Angeles Meeting, q.q. + 801 pages.

R. W. Lenz and A. M. Patel
Polymer Preprints, 11, pp. 613-624 (September 1970)

R. W. Lenz and B. Wesslen
Macromolecules, 4, pp. 20-24 (January - February 1971)

R. W. Lenz, B. Wesslen, W. J. MacKnight and F. E. Krasz
Macromolecules, 4, pp. 24-26 (January - February 1971)

E. E. Lindsey, Editor
Preprints of Papers presented at Short Course in Water Quality Control, Spring, 1971

S. Middleman and G. Vasudevan
"Momentum, Heat and Mass Transfer to a Continuous Cylindrical Surface in Axial Motion", AIChE Journal, 16, pp. 614-619 (1970)

S. Middleman and N. C. Shih
"Post Extrusion Heat and Mass Transfer from Polymeric Film", Polymer Engg. and Sci., 10, pp. 4-12 (1970)

S. Middleman and J. M. Wheeler
"Machine Computation of Transients in Fixed Beds with Intraparticle Diffusion and Nonlinear Kinetics", IEC Fundamentals, 9, pp. 624-627 (1970)

R. J. Novak, J. E. Manson and J. W. Zahradnik
"Analog Simulation of a Time-Shared Automatically Controlled C. A. Apple Storage", Transactions of the A.S.A.E., 13, 5, pp. 574-576 (1971)

R. J. Novak, J. E. Manson and J. W. Zahradnik
"Simulation of a Time-Shared Automatically Controlled C. A. Apple Storage", Agricultural Engineering, 51, 8, pp. 472-473, (August, 1970)

L. H. S. Roblee, Jr. and D. F. Lieb
"A Radioisotopic Tracer Study of Carbon Formation in Ethanol-Air Diffusion Flames", Combustion and Flame, 14, pp. 285-296 (1970)

W. L. Short and T. J. Skaar
"A Study of Hydrogen Bonding in Organic Removal by Reverse Osmosis", submitted to Desalination

W. L. Short, R. T. Skrinde and D. J. Smola
"Reverse Osmosis Treatment of Wastewaters", Applied Polymer Symposia, 13, Membranes from Cellulose and Cellulose Derivatives

M. Vanpee, W. R. Kineyko and R. Caruso
"Experimental Determination of the Oscillator Strengths for the $A^2\Sigma - X^2\Sigma$ Band System of Aluminum Oxide", Combustion and Flame, 14, pp. 381-395 (September 1970)

M. Vanpee, K. D. Hill and W. R. Kineyko
"Absolute Rate Constant Measurements for the Radioactive Combination of Atomic Oxygen with Nitric Oxide", AIAA Journal, Vol. 9, No. 1, pp. 135-139, (January 1971)

J. R. Kittrell
"Catalyst Body Consisting of Physical Mixture of Different Catalysts, One of Which Comprises Rhenium", U. S. Patent 3, 535, 231, October 20, (1970).

J. R. Kittrell and R. S. Sullivan
"Method of Reducing Hydrocracking Activity Decline Rate of Catalyst Comprising Layered Crystalline Clay-Type Aluminosilicate Component", U. S. Patent 3, 535, 272, October 20, (1970)

J. R. Kittrell
"Hydrotreating Catalyst Comprising an Ultra-Stable Crystalline Zeolitic Molecular Sieve Component, and Methods for Making and Using Said Catalyst", U. S. Patent 3, 536, 605, October 27, (1970)

J. R. Kittrell
"Hydrocarbon Conversion Catalyst Comprising In Ultra-Stable Crystalline Zeolitic Molecular Sieve Component, and Methods for Making and Using Said Catalyst", U. S. Patent 3, 536, 606, October 27, (1970)

J. R. Kittrell and J. Jaffee
"Hydrocarbon Conversion Catalyst Comprising a Substantially Metals-Free Layered Crystalline Clay-Type Aluminosilicate Component in a Matrix of Other Catalyst Components, and Process Using Said Catalyst", U. S. Patent 3, 535, 229, October 20, (1970)

J. R. Kittrell
"Hydrocracking Catalyst Comprising a Layered Clay-Type Crystalline Aluminosilicate Component, a Group VII Component and Rhenium and Process Using Said Catalyst", U. S. Patent 3, 535, 230, October 20, (1970)

J. R. Kittrell
"Catalyst Body Consisting of Physical Mixture of Different Catalysts", U. S. Patent 3, 546, 095, December 8, (1970)

J. R. Kittrell
"Hydrocarbon Conversion Catalyst and Process", U. S. Patent 3, 546, 096, December 8, (1970)

J. R. Kittrell
"Hydrotreating Catalyst Comprising an Ultrastable Crystalline Zeolitic Molecular Sieve Component, and Methods for Making and Using Said Catalyst", U. S. Patent 3, 558, 471, January 26, (1971)

J. R. Kittrell
"Hydrocracking Catalyst Comprising a Crystalline Zeolitic Molecular Sieve Component, A Group VIII Component and Rhenium, and Process Using Said Catalyst", U. S. Patent 3, 558, 472, January 26, (1971)

J. R. Kittrell and S. M. Csicsery
"Hydrocracking Catalyst Comprising a Layered Clay-Type Crystalline Aluminosilicate Component, a Group VIII Component and Manganese or Technetium, and Process Using Said Catalyst", U. S. Patent 3, 558, 473, January 26, (1971)

J. R. Kittrell
8 patent applications pending in U. S. Patent Office, including composition of matter, method of preparation, and process claims for hydrogen-hydrocarbon conversion catalysts.

(ii) Chemical Engineering Department

R. S. Kirk
Participated in Third Annual Short Course in Water Quality Control, U Mass., March 22-24, 1971

R. W. Lenz
ACS Short Course, "Applied Polymer Science", Saddle Brook, New Jersey, February 1971 (44 industrial chemists enrolled).

Two lectures in Short Course, "Fundamentals in Polymerization and Polymer Characterization" at University of Detroit, May 1971.

E. E. Lindsey
Director, Short Course, "Water Quality Control", U Mass., March 22-24, 1971

J. M. Douglas
Seminar presented at Union Carbide "Periodic Processing" October 12, 1970

Seminar presented at the University of Connecticut, "Periodic Processing" March 15, 1971

Seminar presented at Stevens Institute of Technology, "Uniqueness of Constituitive Models", March 29, 1971

Seminar presented at Clarkson College of Technology, "Uniqueness of Constituitive Models", April 22, 1971

R. L. Laurence
Seminar presented at the Polymer Research Institute, "Polymer Research", May 1971

Seminar presented at the Tennessee Eastman Co., "Instability In Flows with Viscous Heating", January 1971

R. W. Lenz
Presented paper at the IUPAC Conference on Chemical Transformations of Polymers, Bratislava, Czechoslovakia, June 1971

Lectured for PSE Special Course held at Hooker Chemical Co. Research Laboratories, Niagra Falls, New York, June 1970

Presented paper at the ACS National Meeting, Chicago, Illinois September 1970

Talk given to ACS Regional Section, Wilmington, Delaware, October 1971

Research seminar presented at Eastman Kodak Co. Research Laboratories, Rochester, New York, June 1970

Research seminar presented at McGill University, Montreal, Canada October 1970

Research seminar presented at Worcester Polytechnic Institute, February 1971

Research seminar presented at Du Pont Co. Experimental Station, Wilmington, Delaware, October 1970

Research seminar presented at Tennessee Eastman Co. Research Laboratories, Kingsport, Tennessee, March 1971.

Research seminar presented at Diamond Shamrock Co. Research Laboratories, Painesville, Ohio, May 1971

Research seminar presented at the Royal Institute of Technology, Stockholm, Sweden, June 1971.

Research seminar presented at the University of Mainz, Mainz, Germany, June 1971.

Research seminar presented at the Center for Macromolecular Research, Strasbourg, France, June 1971.

Research seminar presented at the University of Freiburg, Freiburg, Germany, June 1971.

Research seminar presented at the Institute of Macromolecular Chemistry, Prague, Czechoslovakia, June 1971.

Research seminar presented at the Swiss Federal Institute of Technology, Zurich, Switzerland, June 1971.

W. L. Short and R. Querido
Presented paper at AIChE Annual Meeting, "SO_2 Removal from Stack Gases Using CO", December 1970.

W. L. Short and T. J. Skaar
Presented paper at AIChE National Meeting "A Study of Hydrogen Bonding in Organic Removal by Reverse Osmosis", February, 1971.

W. L. Short
Seminar presented at Polytechnic Institute of Brooklyn, Brooklyn, New York, March 1971.

Participated in EPA sponsored Environmental Teach In, Springfield Technical Community College, April 1971.

(ii) Chemical Engineering Department

J. W. Eldridge
Themis Contract, N00014-68-A-0146-4, "New Composite Materials via Direct Polymerization on or in Catalyst-Carrying Substrates", September 1, 1969 - August 31, 1970, $11,853

J. M. Douglas
NSF Grant GK 4556, "Periodic Performance of Chemical Processes", September 15, 1968 - September 15, 1970, $57,600

PRF Grant #3398-A6, "Approximate Solutions of Optimization Problems Using Perturbation Theory", July 1, 1968 - August 31, 1970 $20,640

J. R. Kittrell, R. L. Laurence and H. O. Hultin
NSF GK 29197, "Catalytic Reactor Studies Using Immobilized Multi-Enzyme Systems", June 1, 1971 - May 31, 1972, $44,000

R. W. Lenz
Themis Contract, N00014-68-A-0146-4, "Preparation and Evaluation of New Polymers", September 1, 1969 - August 31, 1970, $11,293

NSF Grant GK 16622, "Reaction-Induced Crystallization of Polymers", January 15, 1970 - January 15, 1972, $41,000

E. E. Lindsey and W. L. Short
FWQA Grant 17050 EHG, "Reverse Osmosis Treatment of Wastewaters", June 1, 1970 - May 31, 1971

T. J. McAvoy
NSF Grant GK 2982, "On-Line Process Control Using an Analog Computer", June 1, 1968 - June 30, 1972, $48, 900

W. L. Short
PHS Grant 1 R01 AP 00791-03 "SO_2 and NO_x Removal from Stack Gases by CO", February 1, 1971 - January 31, 1972, $31,246

PHS Fellowship for student stipend, 1 F03 AP 48527-01

FWQA Fellowship for student stipend 1-F1-WP-26,561-01

W. L. Short and T. H. Feng
PHS Training Grant, T 01-AP 00069-02, Air Pollution Training, September 1, 1970 - August 31, 1971, $52,580

M. Vanpee
Bureau of Mines complete stipend support for one graduate student, FY 71, Contract No. 14-09-0050-3090

NSF Grant GK 2801, "Flame Studies of High Energy Fuels and Oxidizers", April 15, 1968 - April 15, 1970, $59,500

U. S. Department of the Interior, Bureau of Mines, DA-G0111343, "Kinetic Studies on Gas Hydrates", March 1, 1971 - February 29, 1972, $24,924

USAF Electronic Systems Division, F 19628-71-C-0130 "Chemiluminescence from Metals and Metal Oxides", March 18, 1970 - February 28, 1972, $6,000

R. L. Laurence

Attended Short Course on "Enzyme Technology", University of Pennsylvania, June, 1970

Attended Annual AIChE Meeting, Chicago, Illinois, November 1970

Attended Directors' Meeting, NSF Education Division, March 1970 Washington, D. C.

Member, Engineering School Ad Hoc Committee on New Degrees

Member, Agricultural School Committee on Undergraduate Program in Food Engineering

Member, P.S.E. Seminar Committee

Director, New England Rugby Football Union

Director, NERFU Tourney

Member, AIChE Polymer Committee

NSF Summer Institute in Polymer Science

R. W. Lenz

Attended Gordon Research Conference on Polymers, New London, New Hampshire, July 1970

Chairman, Lectureship Committee of the Fiber Society

Chairman, Publications Committee, Polymer Division, ACS

Editor, Polymer Preprints and responsible for acceptance of papers and organization of the General Papers Sessions of the Polymer Division at national ACS meetings

Member, Editorial Advisory Board, "Macromolecules"

Member, Advisory Board, "Journal of Polymer Science, Part A-1"

Alternate Councilor, Connecticut Valley Section, ACS

Member, Editorial Board, "Polymer News"

Chairman, Screening Committee for symposium papers for IUPAC Meeting, Boston, 1971

E. E. Lindsey

Member, Water Pollution Control Federation

Member, American Association of Professors in Sanitary Engineering

Elected Diplomat of the American Academy of Environmental Engineers, October 1970

S. Middleman

Participated in A Summer Institute in Polymer Science for College Teachers

R. J. Novak

National Chairman, Measurement Subcommittee of the Equipment Testing Procedures Committee, AIChE

W. L. Short

Member, University Faculty Senate Academic Matters Committee

Member, Ad Hoc Committee, Institute on Man and His Environment

Member, Faculty Senate Ad Hoc Committee on Teaching Loads

Chairman, Bachelors Degree with Individual Concentration Committee

Chairman, AIChE National Program Committee on Inorganic Chemicals

Member, Environmental Protection Agency, Air Pollution Research Grants (Chairman Engineering Panel)

Member, Advisory Committee for Analytical Services Laboratory
Attended Air Pollution Research Grants Advisory Committee Meetings
1) September 1970; 2) January 1971; and 3) April 1971
Made site visits for Environmental Protection Agency:

a). North Carolina State University
b). Wayne State University
c). University of Buffalo
d). Stanford University
e). University of North Carolina
f). University of Washington

Attended Conference of SO_2 Abatement Chemistry, University of California, Lawrence Radiation Laboratory

M. Vanpee
Attended Thirteenth Combustion Symposium (International) Salt Lake City, Utah, August 23-24, 1970
Attended Contract Meeting "Gas Hydrates", U. S. Bureau of Mines, Pittsburgh, Pennsylvania, April 30, 1971

I. Faculty Publications and Patents

(iii) Civil Engineering Department

D. D. Adrian
"Pumped Storage Hydropower," Technical Guidance Center for Industrial Environmental Control Bulletin, Vol. 3, No. 3, March 1971, pp. 1-2.

R. R. Archer and B. F. Wilson
"Mechanics of the Compression Wood Response I Preliminary analysis." Plant Physiol. 46, 1970, 550-556.

A. Chajes and P. S. Hsueh
"Buckling of Axially Loaded Cylindrical Panels." Jour. of the Eng. Mech. Div., Proc. A.S.C.E., Vol. 97, EM3, June 1971.

V. Goldsmith and J. M. Colonell
"Effects of Nonuniform Wave Energy in the Littoral Zone." Coastal Engineering, 1970, Council on Wave Research, A.S.C.E.

P. X. Bellini and F. J. Dzialo
"Forced Vibration of Cylindrically Orthotropic Plates." The Journal of the Acoustical Society of America, Vol. 47, No. 3 (Part 2), 940-942, March 1970.

G. W. Foess and T. H. Feng
"1970 Annual Literature Review on Bottom Deposits." Journal Water Poll. Control Fed., to be published in Vol. 43, June, 1971.

William E. Heronemus and George R. Kidd
"Some Deep Sea Vehicle Personnel Hulls and Energy Storage Subsystems." Project Themis Report UM-70-u.

L. N. Kuzminski
Editor of "Proceedings of Second Annual Short Course in Water Quality Control - Activated Sludge Processes for Industrial Wastes Treatment." 284 pages.

L. N. Kuzminski, T. H. Feng, and C. C. Liu
"Effects of Inorganics on Disinfection by Halogens." Proceedings-National Specialty Conference on Disinfection published by American Society of Civil Engineers, April 1971, pp. 85-111.

Gopal Singh, M. M. Miller, and J. T. Clayton
"Flexural Behavior of a Structural Sandwich: Location of Neutral Axes and Determination of Normal Stresses and Strains." Submitted to American Society of Agricultural Engineers to be published in 1970.

Gopal Singh, M. M. Miller, and J. T. Clayton
"Flexural Behavior of a Structural Sandwich: Vertical Deflection and Distribution of Shear Stresses and Strains." Submitted to American Society of Agricultural Engineers to be published in 1970.

W. A. Nash
"Nonlinear Oscillations of Thin Elastic Circular Plates." Published in Proc. of the Symposium on Stability of Structures, Springer-verlag, Berlin, 1970, pp. 243-348.

Caxton Foster, E. Riseman, F. Stockton
"Counting Responders in an Associative Memory." Trans. on Computers of I.E.E.E.

M. P. White
"Earthquake Response of a Floating Structure." Proc. Conference on Earthquake Analysis of Structures, Ministries of Education and Industrial Construction, Roumania, 1970, pp. 741-754.

M. P. White and R. T. Rataj
"Approximate Calculation of Dynamic Response of Non-linearly Damped Simple System to Earthquake Disturbances." Proc. of IV Symposium on Earthquake Engineering, Indian Society of Earthquake Technology, Roorkee (U.P.), India, 1970, pp. 247-253.

II. Faculty Papers Presented

(iii) Civil Engineering Department

D. D. Adrian
Lectured on Sludge Dewatering at the Civil Engineering Dept., University of Maine, Orono, November 1970.

K. M. Lo, C. S. Chen, J. T. Clayton and D. D. Adrian
Paper presented: "Simulation of Temperature and Moisture Changes in Stored Grain Due to Weather Variability." at American Society of Agricultural Engineers, Chicago, Ill., Dec. 8-11, 1970.

D. D. Adrian
Paper presented: "Water Treatment Sludge Disposal." at New England Water Works Association, Boston, November 27, 1970.

D. D. Adrian
Paper presented: "Workshop on Sludge Disposal." at 3rd Annual Short Course in Water Quality Control, UMass., March 23, 1971.

R. R. Archer
Paper presented: "Continuum annalysis of growth by mapping functions." at Conference on Engineering in Med. and Biol., Washington, D. C., November 15-19, 1970.

W. W. Boyer
Paper presented: "What's With A.S.C.E. Student Chapters?" at National Transportation Engineering Conference, A.S.C.E., Boston, Mass., July 16, 1970.

C. E. Carver, Jr.
Presented paper, "Measurements of Velocity Profiles in Non-Newtonian Flows Using High Speed Photomicroscopy." at National Transportation Engineering Conference, A.S.C.E., Boston, Mass., July 16, 1970.

A. Chajes
Lectured on "Structural Design in Steel." for American Institute of Steel Construction, Hartford, Connecticut.

J. M. Colonell
Presented paper, "Effects of Nonuniform Wave Energy in the Littoral Zone." at Twelfth Conference on Coastal Engineering, Washington, D. C., September 1970. (authors: V. Goldsmith and J. M. Colonell)

F. A. DiGiano
Discussed Environment Problems at following meetings:

University of Massachusetts Engineering Alumni, November 1970.

Conference for Public Works Officials, November 1970.

A.S.C.E. Student Chapter (UMass), December 1970.

UMass Dept. of Chemistry, "Chemistry in Action Seminar Series," February 1971.

UMass Dept. of Physics, "What's In The Air?", February 1971.

New England Council of the A.S.C.E., "The Future of Your Profession." April 1971.

G. W. Foess
Lectured on water treatment at New England Water Works School, sponsored by New England Water Works Association

G. W. Foess
Lectured at Greenfield Community College.

K. Hendrickson
Presented paper, "Studies in River Hydraulics for Design of Steam Power Plants" and "Isolation of Buildings from Ambient Vibrations" at the University College of Cork, Ireland, spring 1971.

W. E. Heronemus
Seminar, "Systems Engineering Approach to Deep Sea Vehicle Design" presented at Florida Atlantic University, May 19, 1970.

W. E. Heronemus
Seminar, "Systems Engineering in the Deep Oceans" presented at Boston University, April 13, 1971.

W. E. Heronemus
Discussed "The UMass Ocean Engineering Program" at Western Mass. Association of Field Engineers and Surveyors, April 13, 1971.

W. E. Heronemus
"Engineering for the Benefit of Mankind" presented at Engineering Society of Western Massachusetts, April 20, 1971.

G. R. Higgins
Presented paper, "Positive Points on Electric Power." at a course in American Studies at Amherst College, April 28, 1971.

L. N. Kuzminski
Lectured twice to Waterworks Operators School sponsored by New England Water Works Association, Hartford, Conn., October 1970. Lowell Technological Institute, March 1971.

L. N. Kuzminski
Lectured to South Hadley Teachers' Association on Environmental Quality Control, October 23, 1971.

L. N. Kuzminski
Presented paper, "Effects of Inorganics on Disinfection by Halogens" at National Specialty Conference on Disinfection, Amherst, Mass., July 8-10, 1970 (authored by L. N. Kuzminski, T. H. Feng, and C. C. Liu)

L. N. Kuzminski
Presented paper, "Comparison of Bacterial Resistance to Disinfection by Halogens." at Annual Meeting, American Society for Microbiology, Minneapolis, Minnesota, May 3, 1971. (authored by L. N. Kuzminski, T. H. Feng, and C. C. Liu)

L. N. Kuzminski
Presented paper, "The Nature of Bacterial Destruction by Halogen Disinfection." at International Meeting of Czechoslovak Society for Microbiology. Stary Smokovec, Czechoslovakia, May 7, 1971. (authored by L. N. Kuzminski, T. H. Feng, and C. C. Liu)

M. M. Miller
Participation in Seminar Series presented by A.I.S.C. and A.S.C.E., Structural Design in Steel at Fairfield, Conn., Feb. 17, 1971.

W. A. Nash
Presented paper, "Large Amplitude Vibrations of Cylindrically Curved Panels" at the Symposium on Modern Developments in Shells, International Association for Shell Structures, Vienna, September 29-30, 1970.

W. A. Nash
Presented paper, "Vibrations of Deep Doubly Curved Shells" at the Third International Symposium on Aerospace Science, Rome, May 7-8, 1971.

W. A. Nash
Presented paper, "Digital Simulation of Random Vibrations" at the Symposium on Non-Linear Mechanics, Delft, Holland, May 11-12, 1971.

L. A. Webster
"Mass Transit for Amherst" presented for Traffic Circulation and Public Transport Panel, League of Women Voters of Amherst Workshop, November 9, 1970.

M. P. White
Seminar, "Frequency, Distribution and Parametric Description of Strong Earthquakes" given during NSF Advanced Science Seminar on Earthquake Engineering at University of Massachusetts, July 1970.

M. P. White
Presented paper, "Seismic Behavior of a Structure Floating in a Pool with Limited Clearances" at Conference on Dynamic Waves, Swansea (U.K.) July 7-9, 1970.

M. P. White
Presented paper, "Earthquake Response of a Floating Structure" at Conference on Earthquake Analysis of Structures, Jassy, Roumania, September 1-4, 1970.

M. P. White
Presented paper, "Approximate Calculation of Dynamic Response of Non-linearly Damped Simple Systems to Earthquake Disturbances" at IV Symposium on Earthquake Engineering, University of Roorkee, Roorkee (U.P.) India, November 14-16, 1970. (authored by M. P. White and R. T. Ratay)

M. P. White
Seminar, "Historic Earthquakes: Distribution and Mechanism of Earthquakes" presented at NSF Advanced Science Seminar on Earthquake Engineering at University of Massachusetts, May 1971.

M. P. White
Radio interviews: (1) "International Cooperation in Earthquake Engineering" (Radio Bucharest, September, 1970); "Earthquakes" (WFCR, May 1971).

III. Grants

(iii) Civil Engineering Department

Grants and Research Contracts:

D. D. Adrian
Federal Water Pollution Control Administration, 17070-DZS, "Source Control of Water Treatment Waste Solids." June 1, 1967 - July 1, 1971. $157,667.

D. D. Adrian (with Giglio, Kaminsky, and Rikkers)
Office of Water Resources Research, Dept. of Interior, B011-Mass, "A Methodology for Planning Optimal Regional Waste Management Systems." July 1, 1968 - July 1, 1971, $260,902.

D. D. Adrian
Federal Water Pollution Control Administration, 1-F1-WP-26,453, "Dewatering and Drying Sludge on Open Air Drying Beds." September 1, 1969 - September 1, 1970. $6,600.

D. D. Adrian
Federal Water Pollution Control Administration, 1-F1-WP-26454, "A Regional Approach to Storm Water Overflows." September 1, 1969 - September 1, 1971, $14,200.

D. D. Adrian
UMass Research Council, M(13)-71(1), Equipment Grant, October 28, 1970 - July 1, 1971, $500.

D. D. Adrian
UMass Water Resources Research Center, WR-41, "A Probabilistic Approach to Stream Sampling." April 1, 1971 - July 1, 1972, $9,000.

S. M. Bemben, W. E. Heronemus, and M. P. White
The Northeast Utilities Service Company gave the Civil Engineering Department $5,000. for unrestricted use.

S. M. Bemben
Water Resources Research Center, WR-37, "The Origin, Effects and Control of Turbidity in an Urban Recreational Lake." September 1970 - January 1972, $12,000.

S. M. Bemben
Naval Civil Engineering Laboratory, Port Hueneme, California, N62399-70-C-0025, "Simulated Wave Loading For Anchor Holding Capacity Model Study." June 30, 1970 - June 30, 1971, $24,944.

S. M. Bemben
Office of Naval Research, N00014-68-A-0146-10, "An Investigation for the Establishment of Design Criteria for Underwater Anchorages." September 1, 1970 - August 31, 1971, $10,474 from sponsor plus $5,557 as Univ. of Mass. share.

C. E. Carver
UMass Research Council, FRG-M13-70(1), "Aerial Survey of Pollutional Sources in the Connecticut River Basin." June 1970 - June 1971, $700.

C. E. Carver
Department of Defense, THEMIS - Subcontract No. N00014-68-A-0146-009, "Utilization of Mobile Breakwater Devices to Reduce Surface Motions of Submersible Vehicles for Deep Ocean Engineering Purposes." September 1, 1970 - August 31, 1971, $18,000.

A. Chajes and M. M. Miller
Department of Defense, THEMIS: "The Nonlinear Behavior of Hull Structures." September 1970 - September 1971, $8,640.

J. M. Colonell
Office of Water Resources Research, U.S. Dept. of Interior (number not yet assigned), "Environmental Factors Affecting the Management of Reservoir Water Quality." July 1, 1971 - June 30, 1973, $80,604.

J. M. Colonell
Office of Naval Research, ONR-N00014-68-A-0146-17, "Simulation Techniques for Dynamic Modeling of Ocean Engineering Structures." September 1, 1970 - August 31, 1972, $21,466.

J. M. Colonell and G. R. Higgins
Office of Water Resources Research, U.S. Dept. of Interior, WRB-008 "Watershed Response to Hydrological Influences." July 1, 1968 - June 30, 1971, $78,266.

F. A. DiGiano and T. H. Feng
Commonwealth of Massachusetts, Division of Water Pollution Control, 15-51450, "Demonstration Plant Studies on Nutrient Removal from Wastewater by Primary Treatment." June 1, 1970 - May 30, 1973, $108,550.

T. H. Feng
Federal Water Pollution Control Administration, Dept. HEW, 5T1-WP-77, Graduate Training Grant - Water Quality and Quantity, July 1, 1965 - June 30, 1970, $191,818.

T. H. Feng
Water Quality Office (WQO) Environmental Protection Agency (EPA), 1T2-WP-267, "Water Supply and Pollution Control." July 1, 1970 - June 30, 1975, $49,468 (01-year).

T. H. Feng
Office of Water Resources Research, Dept. of Interior, B005-Mass, "Control of Benthic Deposits in Lakes." July 1, 1967 - June 30, 1970, $36,900.

T. H. Feng
Public Health Service, Dept. HEW, PHT-7-43 (5 D04-AH00743), "Water Quality Engineering." July 1, 1967 - June 30, 1972, $83,890.

T. H. Feng
Public Health Service, Dept. HEW, EH-68-644 (5-A10-AH-00655), "Environmental Health Traineeship Grant." July 1, 1968 - June 30, 1973, $108,840.

T. H. Feng
Commonwealth of Massachusetts, Division of Water Pollution Control, 15-51452, "Suppression of Bottom Deposit-Water Recycling of Nutrients in Lakes." June 1, 1970 - May 30, 1973, $129,850.

J. Halitsky
Dept. HEW, PHS now EPA, Air Pollution Control Office, 5T01-AP00069-02, "Air Pollution Control Training Program, September 1, 1970 - August 31, 1971, $71,100 (02-yr)

C. T. Adams, W. E. Heronemus and F. D. Stockton
Department of Defense, Project 6 "Themis", "Deep Submergence Vehicle System Design." ONR-N00014-68-A-0146-6, September 1971 - September 1972, $16,607.

L. N. Kuzminski
Commonwealth of Massachusetts, Division of Water Pollution Control, 15-51451, "Pollution of Lakes by Watercraft Exhausts." June 1, 1970 - May 30, 1973, $59,900.

L. N. Kuzminski (project advisor to R. J. Goldberg, undergraduate student)
University of Mass. Educational Improvement Trust Fund, "Determination of Mercury Tolerances by Specific Microorganisms". $500.

W. A. Nash
National Science Foundation, GZ1759, "Development of New Courses in Ocean Engineering." March 30, 1970 - December 31, 1971, $19,000.

W. A. Nash
Air Force Office of Scientific Research, AFOSR68-1527, "Response of Structures to Random Noise." 1959 - August 1971, $17,000.

W. A. Nash
ONR, Themis, N00014-68-A-0146-16, "Studies in Composite Materials," September 1970 - September 1971, $16,000.

W. A. Nash
National Science Foundation, GZ1510, "Graduate Science Seminar in Earthquake Engineering." March 30, 1970 - November 30, 1971, $20,225.

W. A. Nash
National Science Foundation, GK11379, "Grant for Purchase of Research Equipment." April 1, 1969 - December 31, 1970, $27,000.

IV. Professional Activities

(iii) Civil Engineering Department

D. D. Adrian
Member of the Technical Practice Committee and Chairman of the Committee on Sludge Dewatering of the Water Pollution Control Federation. Secretary, Western Branch of the Massachusetts Section, American Society of Civil Engineers. Taught in EPIC Program. (see II-6).

S. M. Bemben
President, Western Branch of the Massachusetts Section, American Society of Civil Engineers. Member of the Qualifications Committee, Massachusetts Area, American Society of Civil Engineers.

W. W. Boyer
Member, Amherst Zoning Board of Appeals. Advisor, Student Chapter, American Society of Civil Engineers.

C. E. Carver
Chairman, Task Committee on Non-Newtonian Flow, Fluid Dynamics Committee, Engineering Mechanics Division, American Society of Civil Engineers. Member, ECPD Visitors for Evaluating Engineering Curricula. Technical Council, Oceanographic Engineering, American Society of Civil Engineers.

A. Chajes
Writing textbook on Structural Stability under contract with Prentice-Hall. Elected to honorary membership in Column Research Council. Member of Committee on Compression Members, Structures Division, American Society of Civil Engineers. Member of Task Committee on Cylindrical Shells, Column Research Council.

J. M. Colonell
Reviewer for Applied Mechanics Reviews and for Journal of Waterways and Harbors Division, American Society of Civil Engineers. Participant in NATO Advanced Study Institute on Boundary Layers of the Atmosphere and Ocean, Isle of Man (U.K.) September 1970.

F. A. DiGiano
Organized and taught a short course on Air Pollution for High School teachers as part of the EPIC Program. Member of organizing committee for the Third Annual Short Course on Water Quality Control.

F. Dzialo
Sewer Commissioner, Town of Hatfield.

T. H. Feng
Member of the Standard Methods Committee and of the Research Committee of the Water Pollution Control Federation. University of Massachusetts member of the New England Consortium on Air Pollution. Officer of Public Health Service. President of the Eastern American Chapter of Phi Tau Phi.

J. Foess
Moderator of one session of the Short Course on Combined Treatment; also set up group demonstrations for that course.

T. A. Grow - Assistant Department Head
ECPD Engineering Technology Curricula visitor. Member of the Advisory Council of the Technical Information Center for the construction industry at University of Vermont.

J. Halitsky
Newly appointed by President Wood as the University of Massachusetts member of the Board of Directors of the New England Consortium on Air Pollution (replacing Dr. Feng). Ad hoc member of Air Pollution Training Grant Site Evaluation Team (Air Pollution Control Office).

W. E. Heronemus - Associate Department Head
Paper Review Chairman, Underwater Technology Division, American Society of Mechanical Engineers. Member of the R & D Panel on Submersibles of the Society of Naval Architects and Marine Engineers. Member of the Committee on Education of the Marine Technology Society.

G. R. Higgins
Member of the Committees on Certification of Waterworks Personnel and on Rainfall and Yields of Drainage Areas of the New England Waterworks Association.

L. N. Kuzminski
Program Chairman, National Specialty Conference on Disinfection held at University of Massachusetts 8-10 July 1970. Chairman of Committee on Prevention of Industrial, Commercial and Agricultural Chemical Pollution of Water Resources, the American Waterworks Association.

W. A. Nash - Coordinator of Civil Engineering Graduate Program
Editor of the International Journal of Non-Linear Mechanics (recently changed from a quarterly to a bi-monthly publication). Associate Editor, Applied Mechanics Reviews. Project Director, NSF Advanced Science Seminars in Earthquake Engineering held at University of Massachusetts in June 1970 and in May and June 1971.

M. P. White
Member of Panel on Solid Earth Geophysics and Earthquake Engineering of the National Academy of Sciences Advisory Committee to Essa (now NOAA). Member of Ad-hoc Committee on Membership Structure and of Committee on Fellowships, Scholarships, Grants and Bequests of the

American Society of Civil Engineers. Member of the Bibliography Committee and of the 1971 Nominating Committee of the Earthquake Engineering Research Institute. Consultant to the Advisory Committee on Reactor Safeguards, Atomic Energy Commission. Co-director of the Advanced Science Seminars on Earthquake Engineering held at University of Massachusetts June 1970 and May and June 1971. Co-chairman of one session of Conference on Earthquake Analysis of Structures held at Jassy, Roumania, September 1970.

Note: Most members of the Department do some private consulting. This has not been reported here.

I. Faculty Publications and Patents

(iv) Electrical Engineering Department

L. S. Bobrow and S. L. Hakimi
"Graph Theoretic q-ary Codes," IEEE Transactions on Information Theory, Vol. IT-17, No. 2, pp. 215-218, March 1971.

L. S. Bobrow
"Decoding Augmented Cutset Codes," IEEE Transactions on Information Theory, Vol. IT-17, No. 2, pp. 218-220, March 1971.

R. W. Ehrich and E. M. Riseman
"Contextual Word Recognition Using Binary Digrams," IEEE Transactions on Computers, Vol. C-20, No. 4, pp. 397-403, April 1971.

L. E. Franks
"Evaluation of the Effects of Notch Filters on Digital Data Transmission," IEEE Transactions on Communication Technology, Vol. COM-18, No. 4, August 1970.

L. E. Franks and L. D. Dann
"Implementation of N-path Filters Using Polarity-reversal Modulation," IEEE Symposium Digest, 1970 Canadian Symposium on Communications, November 1970.

L. E. Franks and W. A. Gardner
"An Alternative Approach to Linear Least Squares Estimation of Continuous Random Processes," Proceedings of Fifth Annual Princeton Conference on Information Sciences and Systems, March 1971.

R. M. Glorioso and G. R. Grueneich
"A Training Algorithm for Systems Described by Stochastic Transition Matrices," IEEE Transactions on Systems, Man, and Cybernetics, Vol. SMC-1, No. 1, January 1971.

R. M. Glorioso, G. R. Grueneich, and D. McElroy
"Adaptive Routing in a Large Communications Network," Proceedings of the 1970 IEEE Symposium on Adaptive Processes (9th) Decision and Control, December 1970.

R. M. Glorioso, et al.
"Equipment for the Digital Laboratory," (Invited Paper) Proceedings of the Purdue 1971 Symposium on Applications of Computers to Electrical Engineering Education, April 1971.

R. M. Glorioso, et al.
"Digital Systems Laboratory Courses and Laboratory Development," Report of the Task Force VI of the COSINE Committee, Commission on Education, National Academy of Engineering, Washington, D.C., March 1971.

C. E. Hutchinson and P. J. Noone
"Stability and Maneuverability of a Tail-Fin Stabilized Submersible," Technical Report No. THEMIS-UM-70-6, University of Massachusetts, Amherst, Massachusetts, 138 pgs., 23 figs., September 1970.

D. R. Jackson
"Magnetoelastic Bandwidth Compression," Proceedings of the IEEE, Vol. 59, pp. 20-25, January 1971.

I. Lee
"State Estimation in Time-Varying Linear Systems by Minimum Order Observers," Proceedings of KYOTO International Conference on Circuit Theory, Institute of Electronics and Communication Engineers of Japan, September 1970.

I. Lee
"Complementary Roles of Mini-Computers and Time-Sharing System in Computer-oriented Electrical Engineering Curriculum," IEEE Transactions on Education, 1971 (in press).

R. E. McIntosh and S. E. El-Khamy
"Optimum Pulse Transmission Through a Plasma Medium," IEEE Transactions on Antennas and Propagation, Vol. AP-18, No. 5, pp. 666-671, September 1970.

R. E. McIntosh and S. E. El-Khamy
"Nonlinear Dispersion of Electromagnetic Transient Signals Propagating Through a Partially Ionized Plasma," IEEE Transactions on Antennas and Propagation, Vol. AP-19, No. 1, pp. 147-149, January 1971.

R. E. McIntosh and R. G. Andrews
"Dispersion of Transient Electromagnetic Signals Propagating Along a Coaxial Gas Discharge," Journal of Applied Physics, Vol. 42, No. 4, pp. 1857-1862, May 1971.

R. E. McIntosh and R. M. Grossman
"Optimum Pulse Transmission Through an Exponential Plasma Inhomogeneity," IEEE Transactions on Antennas and Propagation, Vol. AP-19, No. 3, 3 pgs., May 1971.

R. E. McIntosh and S. F. Marlier
"Experimental Apparatus to Investigate Transient Nonlinear Effects in a Plasma," The Review of Scientific Instruments, Vol. 41, No. 6, 6 pgs., June 1971.

R. E. McIntosh, S. E. El-Khamy, and S. F. Marlier
"Transient Microwave Breakdown of Low Pressure Gases," 23rd Annual Gaseous Electronics Conference, Conference Program, p. 75, October 1970.

R. E. McIntosh and L. W. Pickering
"Wiener Filtering of Signals Randomly Distorted by a Dispersive Medium," 1971 USNC-URSI Spring Meeting, Conference Program and Abstracts, p. 111, April 1971.

R. E. McIntosh and S. F. Marlier
"An Experiment to Investigate the Microwave Breakdown of Low Pressure Air," Engineering Research Institute Report, No. P5, 49 pgs., January 1971.

R. E. McIntosh and S. E. El-Khamy
"The Enhanced Transmission of Transient Electromagnetic Signals Through Plasmas," Engineering Research Institute Report, No. P6, 120 pgs., January 1971.

R. E. McIntosh and R. L. St. Germain
"An Investigation of the Resonant Behavior of a Hot Nonuniform Plasma Column in the Presence of an Axial Magnetic Field," Engineering Research Institute Report, No. P7, 52 pgs., January 1971.

R. V. Monopoli, J. W. Gilbart, and C. F. Price
"Improved Convergence and Increased Flexibility in the Design of Model Reference Adaptive Control Systems," Proceedings of the 1970 IEEE Symposium on Adaptive Processes Decision and Control, Austin, Texas, pp. IV 3.1-IV 3.10, December 1970.

R. V. Monopoli and J. W. Gilbart
"Parameter Adaptive Control of a Class of Time Varying Plants," Proceedings of the Fifth Annual Princeton Conference on Information Sciences and Systems, March 1971.

R. V. Monopoli and B. K. Wylie
"Two New Theorems for Stability Analysis of Error Sampled Neural Pulse Frequency Modulated Control Systems," Proceedings of the Fourteenth Midwest Symposium on Circuit Theory, Denver, Colorado, pp. 1.7-1 to 1.7-10, May 1971.

R. V. Monopoli and B. K. Wylie
"A Stability Analysis of a Pulse Frequency Modulated Error Sampled Control System," Proceedings of SIAM Symposium on Control Theory, Seattle, Washington, June 1971.

D. Navon
"Power Transistor Stability and Reliability," Proceedings - 24th Power Sources Symposium, p. 115, August 1970.

D. Navon
"Solid State and Semiconductors," Section 2.1, pp. 201-225; "Magnetic Materials," Section 2.5, pp. 245-248, Handbook of Tables for Applied Engineering Science, edited by R. E. Bole and G. L. Tuve, July 1970.

D. Navon
"Electronics Materials and Devices," Class notes for EE 201, Preliminary to publication.

D. E. Scott and E. Dzendolet
"The PDP-8/I as a CAT," Behavioral Research Methods and Instrumentation, 1971, Vol. 3(2), pp. 79-81. (Republished by editor's request from Proceedings of Spring 1970 Digital Equipment Corp. Symposium.)

D. E. Scott, I. B. Thomas, and R. J. Niederjohn
"Use of the PDP-8/I for Formant Tracking and Classification of Speech Sounds," Proceedings of Fall 1970 Digital Equipment Corp. Users Society Symposium, pp. 157-163.

D. E. Scott
"Comments on a Comparison of Coherent Averaging Techniques for Repetitive Biological Signals," Medical Research Engineering, Vol. 9, No. 4, pp. 7-8, September 1970.

T. W. Tang and A. Sivasubramanian
"Nonlinear Instability of Modulated Waves in a Magnetoplasma," The Physics of Fluids, Vol. 14, p. 444, February 1971.

I. B. Thomas, P. B. Hill, F. S. Carroll, and B. Garcia
"Temporal Order in the Perception of Vowels," J. Acoust. Soc. Amer., Vol. 48, No. 4, pp. 1010-1013, October 1970.

I. B. Thomas, R. J. Niederjohn, and D. E. Scott
"Use of the PDP-8/I for Formant Tracking and Classification of Speech Sounds," Proc. DECUS Fall Symposium, pp. 157-163, November 1970.

I. B. Thomas and R. J. Niederjohn
"Computer Recognition of Phonemic Segments in Connected Speech," Proc. NEC, Vol. 26, pp. 83-88, December 1970.

I. B. Thomas, P. D. Dinicola, M. P. Elia, and C. S. Pasierbiak
"Auditory Memory in a Pitch Discrimination Task," J. Acoust. Soc. Amer., Vol. 48, No. 6, pp. 1383-1386, December 1970.

I. B. Thomas and D. W. Sparks
"Discrimination of Filtered-Clipped Speech by Hearing Impaired Subjects," J. Acoust. Soc. Amer., Vol. 49, No. 6, pp. 1538-1546, June 1971.

I. B. Thomas and R. J. Niederjohn
"Formant Tracking, Categorization, Segmentation and Recognition of Phonemic Segments in Continuous Speech," Tech. Report No. 7, Speech Communications Laboratory, 145 pgs., June 1971.

K. S. Yngvesson
"Potentials of Masers for Millimeter Wave Radio Astronomy," Proceedings of the IEEE International Convention, New York, March 1971.

II. Faculty Papers Presented

(iv) Electrical Engineering

R. W. Ehrich and E. M. Riseman
"Contextual Error Detection," Spring Joint Computer Conference, Atlantic City, New Jersey, May 18, 1971.

L. E. Franks
"N-path Filters--A Tutorial Review and Some Recent Developments," Electrical Engineering Seminar, University of Vermont, April 16, 1971.

R. M. Glorioso
"Applied Mathematics - The Basis of Modern Society," Fall Meeting of The Association of Teachers of Mathematics in New England, Westfield, Massachusetts, October 1970.

R. M. Glorioso
"Adaptive and Learning Systems," Electrical Engineering Department Seminar, University of Delaware, May 1971.

R. M. Glorioso
"Minicomputers in beginning Engineering Programs," (Invited Paper) Middle Atlantic Section Spring Meeting of the American Society for Engineering Education, Wilmington, Delaware, May 1971.

R. M. Glorioso
"Adaptive Routing in Communications Networks," Computer Science Colloquium, Electrical Engineering Department, University of Connecticut, May 1971.

F. S. Hill, Jr.
"Transmission of Information-Modulation," Lecture for Engineering 103, University of Massachusetts, October 1970.

F. S. Hill, Jr.
"Digital Communication-Pulse Code Modulation," Lecture for Engineering 103, University of Massachusetts, December 1970.

I. Lee
"Applications and Operating Environment for Interactive Computer Graphics," C. ITOH Electronic Computer Service Company, Tokyo, Japan, September 2, 1970.

I. Lee
"Interactive Graphics in Time-Sharing Environment," Central Research Laboratory, Hitachi, Ltd., Tokyo, Japan, September 4, 1970.

I. Lee
"Computing in Japan and Russia," Pioneer Valley Student Chapter of the Association for Computing Machinery, October 6, 1970.

I. Lee
"Mini-Computer versus Time-Sharing in Electrical Engineering Education," Panel Discussion, Purdue Symposium on Application of Computers in Electrical Education, Purdue University, April 28, 1971.

I. Lee
"Man-Machine Communications," New England Junior Science and Humanities Symposium, April 2, 1971.

I. Lee
"Interactive Computer Graphics: Promise and Reality," Colloquium, School of Electrical Engineering, Cornell University, April 13, 1971.

I. Lee
"Man-Man and Man-Machine Communications," Student Chapter of IEEE, University of Massachusetts, Amherst, Massachusetts, April 29, 1971.

I. Lee
"Interactive Computer Graphics as an Engineering Tool," Seminar, Department of Industrial Engineering and Operations Research, University of Massachusetts, Amherst, Massachusetts, April 30, 1971.

R. E. McIntosh and S. E. El-Khamy
"Characteristic Times of the Transient Microwave Breakdown of Air," Twelfth Annual Meeting of the Division of Plasma Physics, November 5, 1970. (Abstract appears in the Bulletin of the American Physical Society, Vol. 15, No. 11, p. 1469, November 1970.)

D. E. Scott
"Techniques in Modeling Nonlinear Biological and Ecological Systems," Agricultural Engineering Seminar, University of Massachusetts, May 4, 1971.

D. E. Scott
"Bio-engineering," New England Junior Science and Humanities Symposium, April 1-2, 1971, University of Massachusetts.

D. E. Scott
"Biomedical Engineering, Where it is Going and Where it has Come From," IEEE Student Branch Meeting, February 23, 1971, University of Massachusetts, Amherst, Massachusetts.

T. W. Tang
"Wave Propagation in Inhomogeneous Magnetoplasmas," 1970 Annual Meeting of the Division of Plasma Physics, Washington, D.C., November 4-7, 1971.

I. B. Thomas, R. P. Cetti, and P. W. Chase
"Effect of Silent Intervals on the Perception of Temporal Order for Vowels," Acoustical Society of America 80th Meeting, Houston, Texas, November 3, 1970.

I. B. Thomas and A. Ravindran
"Preprocessing of an Already Noisy Speech Signal for Intelligibility Enhancement," Acoustical Society of America 80th Meeting, Houston, Texas, November 6, 1970.

I. B. Thomas and D. W. Sparks
"Thresholds for Spectrally Complex Stimuli in Pathological Ears," Acoustical Society of America 80th Meeting, Houston, Texas, November 6, 1970.

I. B. Thomas and R. J. Niederjohn
"Use of the PDP-8/I for Formant Tracking and Classification of Speech Sounds," DECUS Fall Symposium, Houston, Texas, November 20, 1970.

I. B. Thomas and R. J. Niederjohn
"Computer Recognition of Phonemic Segments in Connected Speech," National Electronics Conference, Chicago, Illinois, December 7, 1970.

I. B. Thomas and P. J. Fitzgibbons
"Temporal Order and Perceptual Classes," Acoustical Society of America 81st Meeting, Washington, D.C., April 20, 1971.

I. B. Thomas
"Speech Processing," New England Junior Science and Humanities Symposium, Amherst, Massachusetts, April 1, 1971.

I. B. Thomas
"Prosthetic Aids for the Deaf," IEEE Student Branch Meeting, March 18, 1971.

I. B. Thomas
"Spectrum Analysis of Speech Sounds," Linguistics Faculty and Students, University of Massachusetts, Amherst, Massachusetts, October 9, 1970.

K. S. Yngvesson
"Millimeter Wave Masers for Radio Astronomy," National Radio Astronomy Observatory, Charlottesville, Virginia, August 3, 1970.

K. S. Yngvesson
"Potentials of Masers for Millimeter Wave Radio Astronomy," IEEE International Convention, New York, March 23, 1971.

III. Grants

(iv) Electrical Engineering Department

L. E. Franks
"Optimum Filtering of Cyclostationary Processes Resulting from Scanning or Sampling of Communication and Control Signals," Air Force Office of Scientific Research, $26,350 for one year starting June 1, 1971. Support for two graduate students.

R. M. Glorioso
"Computer Systems Engineering - Instructional," Scientific Equipment Grant, NSF Grant GY-7788, $25,000 matching funds from July 1, 1970 to July 31, 1972.

C. E. Hutchinson, R. V. Monopoli, W. E. Heronemus, F. D. Stockton, and D. E. Cromack
ONR-00014-68A-0146-6 (Renewal), $59,030, September 1, 1970 to August 31, 1971, five graduate students.

C. E. Hutchinson
Co-Manager, THEMIS Project, ONR-00014-68A-0146, (Renewal), $160,000, September 1, 1970 to August 31, 1971.

D. R. Jackson
"Parallel Pumping of Elastic Modes in Ferrimagnetic Crystals," National Science Foundation Grant GK-4945, $15,000, June 1, 1969 to March 29, 1971. Support for one graduate student.

R. E. McIntosh
"Optimum Pulse Transmission Through Dispersive Media," NSF Grant GK-4897, $15,000, Continued to September 1971. Support for one graduate student.

R. E. McIntosh and T. W. Tang
"The Propagation of High Energy Pulses in Ionized Media," Air Force Office of Scientific Research, Grant AFOSR-69-1722, $35,000 from February 1, 1969 to January 30, 1971. Support for two graduate students.

R. E. McIntosh
"Proposed Studies of the Propagation of Transient Signals Through Nonlinear, Ionized Media," Air Force Office of Scientific Research Grant AFOSR-69-1722A, $20,400 from February 1, 1971 to January 30, 1972. Support for two graduate students.

R. E. McIntosh
"Optimum Pulse Transmission Through Dispersive Media - Modified Objectives," ARO-D Grant ARO-D-31-124-70-G37, $25,544 from December 1, 1969 to November 30, 1971. Support for one post-doctoral research associate.

R. E. McIntosh and G. Dale Sheckels
"Laboratory Equipment for Graduate Research in Electrical Engineering," NSF Grant GK-29196, $38,800 from May 15, 1971 to May 31, 1972.

R. V. Monopoli
Renewal of NASA NGR-22-010-018 for $31,600 from February 1, 1971 to February 1, 1972.

R. V. Monopoli
"Automatic Control Systems Instructional Scientific Equipment Grant," NSF GY-6612, $20,600 matching funds from July 1, 1969 to May 31, 1971.

D. Navon
"Power Transistor Stability and Reliability Study," U.S. Army Electronics Command, Fort Monmouth, New Jersey, DAAB-07-71C-0260, $26,300 from June 1, 1971 to May 31, 1972. Support for two graduate students.

T. W. Tang
"Study of Nonlinear Electromagnetic Wave Interactions in an Inhomogeneous Magnetoplasma," National Science Foundation Grant GK-18514, $44,500 from October 1, 1970 to September 30, 1972. Support for two graduate students.

I. B. Thomas
"Speech Analyzing Aids for the Deaf," National Institutes of Health, NS-08306-02, $26,036 from May 1, 1970 to April 30, 1971. Support for three graduate students.

I. B. Thomas
"Speech Analyzing Aids for the Deaf," National Institutes of Health, NS-08306-03, $131,275 from May 1, 1971 to April 30, 1974. Support for four graduate students.

I. B. Thomas
"Prosthetic Aids for the Deaf," Grant of $4500 from Rev. and Mrs. Howard C. Shaffer. Support for one graduate student.

K. S. Yngvesson
"Maser Receivers for Two to Three Millimeter Wavelength," National Science Foundation Grant GP-26108, $52,200 from March 1, 1971 to February 28, 1972. Support for two graduate students. Cooperative project with the University of California, Berkeley.

IV. Consulting and Other Professional Activities

(iv) Electrical Engineering Department

L. E. Franks
Technology Consultants, Inc., New York, radar signal design and data transmission problems; Prentice-Hall, New Jersey, Manuscript reviews; Chairman, Session II-F, "Digital Signal and Information Processing," Fifth Annual Princeton Conference on Information Sciences and Systems, March 1971; Technical papers review for IEEE Professional Groups on Circuit Theory, Communication Technology, and Information Theory; Review of two proposals for NSF grants.

R. M. Glorioso
National Academy of Engineering, COSINE Task Force VI on Digital Laboratory and Task Force X on Minicomputers; Lehigh University, Digital and Computer Laboratory Development; Lafayette College, Digital and Computer Laboratory Development.

C. E. Hutchinson
The Analytic Sciences Corporation, Reading, Massachusetts, navigation and guidance; Chairman, National Publicity Committee, Eta Kappa Nu; Book review, Allyn and Bacon, Inc., Boston, Massachusetts.

I. Lee
C. ITOH Electronic Computer Service Company, Tokyo, Japan, problems concerning introduction of computer graphics and time-sharing service in a commercial computing center in Japan; Member of University Broadcast Council, University of Massachusetts, Amherst.

R. E. McIntosh
Manuscript review for Addison Wesley and McGraw-Hill; Reviewer for IEEE publications of Antennas and Propagation; Reviewer for IEEE Transactions on Education; Secretary-Treasurer, Springfield Section of IEEE.

R. V. Monopoli
Pratt & Whitney Aircraft Corporation, East Hartford, Connecticut, development of new methods for gas turbine engine control system design.

D. Navon
Handbook of Tables for Applied Engineering Science, published by the Chemical Rubber Company, member of Advisory Board; Luxtron, Inc., Haverhill, Massachusetts; Manuscript review for Intext Education Publishers.

D. E. Scott
Investigation of certain techniques in product design for private corporation (with F. Umholtz and J. Douglas).

G. D. Sheckels
Insurance consulting for General Accident Group.

I. B. Thomas
The Clarke School for the Deaf, Northampton, Prosthetic Aids for the Deaf; The Willie Ross School for the Deaf, Longmeadow, Prosthetic Aids for the Deaf; Scripts/Technica, Inc., Washington, D. C., translation of Russian to English; Hampshire College, Amherst, consultant on Electronic Music Studio; Holyoke Water Power, Noise Prevention.

K. S. Yngvesson
National Radio Astronomy Observatory, Charlottesville, Virginia, low-noise multimeter wave receiver problems.

(v) Mechanical and Aerospace Engineering Department

L. L. Ambs with G. A. Russell and J. G. McGowan
"Study of Two Stage Automotive External Combustor," grant from Environmental Protection Agency, $110,000 and overhead for three years.

G. Boothroyd
N.S.F. Undergraduate Research Participation Grant, $7,920.

G. Boothroyd
N.S.F. Undergraduate Educational Equipment Grant, $40,800.

G. Boothroyd
N.S.F. Research Grant - Design of Orientive Devices for Vibratory Bowl Feeders, $35,900.

G. Boothroyd and C. R. Poli
N.S.F. Research Grant - "Stability of the Cutting Process and its Effect on Machine Tool Chatter," $50,100 for 2 years.

D. E. Cromack with R. H. Kirchhoff
THEMIS "Vehicle System Design" funding through August 1971 and renewed for Sept. 1971 through Aug. 1972.

D. E. Cromack with C. R. Poli
ARMY Research Office - Durham "A Study of Airborne Towed Vehicle Dynamics," (3 years at $72,930 through May 1973).

J. A. Fillo
NASA Grant still active.

W. P. Goss
NSF Grant GK-24514 "Aerodynamic Performance of Gravity-Vacuum Tube Vehicles," $15,000, through Dec. 31, 1971.

R. H. Kirchhoff
NSF Grant GK-5569 Dielectrophoretic Fluid Mechanics

R. H. Kirchhoff
Project Themis

R. Mani
NSF Grant GK-5215, $15,000

R. Mani
NASA Grant 22-010-063, $15,000

J. G. McGowan with L. L. Ambs and G. A. Russell
"Study of Two Stage Automotive External Combustor," Research Grant from Environmental Protection Agency, Dept. of Health Education and Welfare. ($44,000 - 3/1/71 - 2/28/72 - approximately $140,000 for 3 years.

J. G. McGowan with L. L. Ambs and G. A. Russell
Air Pollution Traineeships from University HEW Air Pollution Training Grant.

C. W. Nelson
NSF Grant GK-2606 active through Dec. 31, 1971.

C. R. Poli with G. Boothroyd
NSF Grant GK-18894, "Instability of the Cutting Process and its Effect on Machine Tool Chatter," 2 years, $50,100 (expires in one year).

C. R. Poli with D. E. Cromack
Army Research Office Grant DA-ARO-D-31-124-70-665 "A Study of Airborne Towed Vehicle Dynamics," 3 years, $72,930 (expires in two years).

J. E. Ritter
"Composite Material Considerations," Contract No. ONR-N00014-68-A-0146-3, Office of Naval Research, extended to Sept. 1, 1972.

J. E. Ritter
"Development of a Two Term Sequence of Materials Courses for Mechanical Engineering Students," NSF Grant 4709, National Science Foundation, terminates Feb. 1, 1972.

G. A. Russell
NSF GY 7765 Undergraduate Scientific Equipment - Dynamic Measurements.

G. A. Russell
N00014-A-68-0146-13 Themis Grant Propella Wake noise research.

J. W. Zahradnik
N.E. Regional Commission - Aquaculture-Environment Interace Pilot Program - $10,400.

J. W. Zahradnik
Cooperative Shellfish Program, Town of Marion - $2,500
Town of Mattapoisett - $2,500

J. W. Zahradnik
NIH CO-60 Irradiation Facility (completed) - $25,000
AEC - 50,000 curies Cobalt 60 valued at $50,000
U Mass Matching Funds - $30,000

J. W. Zahradnik
U Mass Research Council (support for workboat) - $1,000

J. W. Zahradnik
Hatch 218. Heat and Mass Transfer in Food Engineering - $40,000

G. E. Zinsmeister with G. Boothroyd
N.S.F. Undergraduate Participation Grant (GY-5825) terminates Oct. 31, 1971, $7,920

(vi) Mechanical and Aerospace Engineering Department

L. L. Ambs
Member of Engineering Education Activity of Society of Automotive Engineers.

Consulting for General Accident Insurance Company.

M. E. Bates
Attended conference on Undergraduate Teaching on Nov. 11, 1970 at Univ. of Mass..

G. Boothroyd
Consulting with Colt Company, McGraw-Hill, Pergamon Press, and COMTECH.

D. E. Cromack
Deputy Director, Northeast A.I.A.A. Regional Student Conference for three years.

F. R. E. Crossley
Invited lectures given at: Louisiana State Univ., Baton Rouge, Ind., Dec. 1970.

University of Alabama, Tuscaloosa, Ala., Dec. 1970.

Member of doctoral committees for external examination at Columbia University, New York, May 1971.

Member of doctoral committees for external examination at The City University of New York, May 1971.

International Federation work.

A.S.M.E. Design Division work.

U. S. Council on TMM work.

R. W. Day
Attended A.I.A.A. Annual Meeting - New York City.

Attended A.S.M.E. Annual Meeting - New York City.

J. R. Dixon
Consultant, Scott Paper Company, twenty days, Innovation and decision making in design.

Consultant, Bruce Industrial Controls, four days, Thermal Flowmeters.

Member of ASME Committee on Technology and Society.

Member of ASME Goals Working Group No. 1

Chairman, Session on Technology and National Security, ASME Winter Annual Meeting.

W. P. Goss

To the Mitre Corporation for the Office of High Speed Ground Transportation on Tube Vehicle Systems - terminated Dec. 1970 (10 days - from 7/1/70 to 12/1/70).

To the Mitre Corporation for the Office of Science and Technology on a Preliminary Study in Technology Assessment on Automotive Emission Control Mechanisms (5 days).

To Curran Associates in preparing a proposal on Mass Transportation Studies for the lower Pioneer Valley (1 day).

Prof. Soc. Member of ASME, AIAA, AIChE, SAE, ASEE, AAAS.

Comm. Work - Executive Committee Western Mass. Section of ASME.

Comm. Work - Member - SAE National Science - Engineering Activity.

Attended following meetings: SAE Convention, Detroit 1/70; ASME Winter Annual, 12/70, New York; ASEE New England Regional Conference, Univ. of New Hampshire, 10/70; AIAA - Conn. Transportation Symposium, 5/70 (Panel Participant), Hartford, Conn.; SAE Mid Year Meeting 6/71 - Montreal, Canada.

G. Horvay

Member of ASME (attended Dec. 1970 meeting).

Member of AIME, SIAM, AAUP.

R. Mani

Consulting with G.E. Research and Development Centre, Schenectady, New York, for approximately twenty days during academic year: on problems of noise, inlet distortion of aircraft engines.

J. G. McGowan

Spent Summer of 1970 at Kreisinger Development Laboratory, Combustion Engineering, Inc., Windsor, Conn. - worked on furnace modeling and air pollution problems.

Sept. 1970 - May 1971 - 10 days consulting at Combustion Eng'r.

ASME - student advisor, member of Western Mass ASME executive committee, member of National Working Group No. 7 - ASME Goals, attended Winter Annual Meeting.

SAE - attended Annual Meeting.

American Society of Plant Physiologists - member.

Air Pollution Control Association - member.

C. W. Nelson

Attended two day meeting at Brown University on teaching first course in materials.

R. K. Patterson

Liberty - Mutual Insurance Company - Vice Smith College on an accidental death. Several companies are involved and it is necessary that technical service be rendered to them.

C. R. Poli

Consultant for CHOICE (a publication of The Association of College and Research Libraries) three text books were reviewed; Two papers were reviewed for Applied Mechanics Reviews.

J. E. Ritter

ASEE planning committee to organize a workshop on "Teaching the First Course in Materials" to be held at the Annual Meeting of ASEE, Annapolis, June 1971.

Presented a proposal on "Enhancement of the Materials Program at the Black Colleges Through a Consultation Visit" at the ASEE Faculty Interchange Committee Meeting, New Orleans, Oct. 1971.

Consulted with Southern University concerning their materials program, December 3-4, 1970.

Contacted and visited several foundations and agencies in an attempt to secure funds for proposal "Summer Program in Engineering for Minority High School Students from the Inner-City". These include Sloane Foundation, Office of Economic Opportunity, Contribution Committee of Polaroid Corporation, Department of Health, Education, and Welfare, and General Electric Foundation.

Reviewed two proposals for NSF and a paper for J. of American Ceramic Society.

Attended a two day conference on "Materials Education", Brown University, Feb. 1971.

Attended by invitation The Polymer Science Institute Advisory Board Meeting, Univ. of Mass., May 1971.

G. A. Russell

Springfield Wire - consulting on noise control in flow regulating valve.

F. G. Umholtz

Consulting - Russell Harrington Company
Hyde Manufacturing Company

Attended American Society of Mechanical Engineers Annual Conference and Exposition, New York.

Attended Mid-Year Meeting, Engineering Design Graphics Division. Seminar in Product Design.

Member of Engineering Design Education Committee.

J. W. Zahradnik

Consultant to Seafood Farms, Inc., Chicago, Ill.

Chairman - ASAE Bio-Eng. Committee

Member - ASME Food, Drug, and Beverage Eqpt.Committee

Chairman - ASAE Food Eng. Div. Nominating Committee

J. W. Zahradnik

Chairman - ASAE C-A Storage Standards Sub. Committee

Chairman - N.E. Marine Resources Information Program Advisory Board at Univ. of Rhode Island

Member - N.E. Regional Commission Aquaculture Committee

G. E. Zinsmeister

Consulting - Bruce Industrial Controls, Inc., Horsham, Pa.

Associate Member - ASME

Attended Winter Annual Meeting in New York, Nov., 1970.

(vi) Mechanical and Aerospace Engineering Department

L. L. Ambs
"Chlorine-Fluorine Flame Structure" in Thirteenth Symposium (International on Combustion published by the Combustion Institute (with E. A. Fletcher).

G. Boothroyd and L. E. Murch
"Performance of an Orienting Device Employed in Vibratory Bowl Feeders," Trans. ASME Vol. 92 series B no. 3, August 1970, pp. 694-698.

G. Boothroyd and L. E. Murch
"On-off Control of Parts Feeding," Automation Vol. 17 no. 8, August 1970, pp. 32-34.

G. Boothroyd and L. E. Murch
"Predictive Efficiency of Parts Orientive Systems," Automation Vol. 18 no. 2, Feb. 1971, pp. 55-57.

G. Boothroyd
"New Automatic Feeding and Orientive System," accepted by Int. J. Prod. Eng. Vol. 9 (with A. H. Redford).

G. Boothroyd
"Performance of a Slot Orienting Device for Vibratory Bowl Feeders," accepted by Automation (with P. F. Rogers).

G. Boothroyd
Review of "Industrial Uses of Mechanical Vibrations," by I. Gutman for Int. J. of Mechanisms.

D. E. Cromack
"Defining the Flow Field of an Open-Jet Wind Tunnel," Report No. THEMIS-UM-70-3, June 1970, 71 pages (with D. B. Poole).

F. R. E. Crossley
"The Intersection of Solids shown by Electronic Analog for Mechanism Simulation," Trans. ASME, J. of Eng. for Industry (Feb. 1971) Vol. 93 series B. pp. 17-26 (with L. E. Torfason).

F. R. E. Crossley
"Stereoscopic Drawings made by Analog Computer of Three-dimensional Surfaces generated by Spatial Mechanisms," Trans. ASME, J. of Eng. for Industry (Feb. 1971) Vol. 93 series B. pp. 239-250 (with L. E. Torfason).

F. R. E. Crossley
"The International Federation for Theory of Machines and Mechanisms," J. of Mechanisms (Summer 1970) Vol. 5, pp. 133-145.

F. R. E. Crossley
The Journal of Mechanisms - quarterly. Books and theses reviewed - all papers proof-read - some translations.

F. R. E. Crossley
"Simple Memory Circuit for Iterative Analog Computation Simulation," Dec. 1969.

J. R. Dixon
"Introduccion a la Probabilidad," John Wiley & Sons, Inc., 1970 (Book).

J. R. Dixon
"Diseno en Ingenieria Inventiva, Analisis y Toma de Decisiones," McGraw-Hill, Inc., 1970 (Book).

J. R. Dixon
"Engineering a Profession," an ASME publication 70-WA/Av-3, 1970.

J. A. Fillo
"Curvature Effects in Laminar Boundary Layers," J. of Basic Engineering (ASME) Vol. 93, series P no. 1, March 1971 (with R. A. Burbank).

W. P. Goss and D. E. Cromack
"Transportation in a Tube - High Speed Ground Transportation of the Future," A.I.A.A. Conn. Transportation Symposium, Hartford, Conn., May 1971.

W. P. Goss
"A Study of Spacecraft Power Plant Condensers," Final Report on NASA Grant NGR 47-004-006, Virginia Polytechnic Institute, Dec. 1970, 91 pp.

R. Mani
"Compressibility Effects in Kemp Sears Problem," International Symposium on Fluid Mechanics and Design of Turbomachines, Penn. State Univ., Aug. 30-Sept. 3, 1970.

R. Mani
"Note on Influence of Axial Velocity Ratio on Cascade Performance," International Symposium on Fluid Mechanics and Design of Turbomachines, Penn. State Univ., Aug. 30-Sept. 3, 1970 (with M. B. Wilson and A. J. Acosta).

R. Mani
"Diffusion of Radiation Patterns due to Scattering by Random Inhomogeneitics," J. Sound and Vibration (1971) 17, (1), pp. 263-272.

R. Mani
"Noise Due to Interaction of Inlet Turbulence with isolated stators and rotors," J. Sound and Vibration (1971).

J. G. McGowan
"A Feasibility Study of a Hydromagnetic Waterjet Propulsion System," A.I.A.A. Journal of Hydronautics Vol. 5, no. 1, Jan. 1971, pp. 31 (with S. N.B. Murthy).

J. G. McGowan
"An Analytical Modd for the Prediction of Nitric Oxide Emissions from Tangential Fired Furnaces," KDL Lab Report, Combustion Engineering, Inc.

C. W. Nelson
"Apparatus for the Measurement of Internal Friction Under Hydrostatic Pressure," Rev. of Sci. Instr., 41, 1588-1592, 1970 (with H. Goettler).

C. W. Nelson
"On the Measurement of Phase Angles Between Sinusoidal Signals of Very Low Frequencies," J. of Sci. Instru., 4, 1970 (with H. Goettler).

C. R. Poli
"On the Planar Motion of a Large Flexible Satellite," A.I.A.A. Paper No. 71-212, Jan. 1971 (Also accepted for publication in the A.I.A.A. Journal)(with R. Budynas).

J. E. Ritter
"Fatigue Strength of Silicate Glasses," Phys. Chem. Glasses, 11, 16-17 (1970).

J. E. Ritter
"Nonlinear Behavior of Thin Beams in Four-Point Bending," Amer. Ceram. Soc. Bull., 49, 789-93 (1970)(with D. L. Vrooman).

J. E. Ritter
"An Undergraduate Project on a Piezoelectric Loudspeaker," IEEE Trans. Educ., Vol. E-13 (4), 190-2 (1970)(with S. D. Glazer).

J. W. Zahradnik
"Design and evaluation of a CA (controlled atmosphere) apple storage with an external gas seal," (1969) Trans. of ASAE, Vol. 12, 3, 286-289 (with C. A. Johnson).

J. W. Zahradnik
"Simulation of a time-shared automatically controlled CA apple storage", (1970) Agric. Engr. Vol. 51, 8, pp. 472-473 (with J. E. Manson and R. J. Novak).

J. W. Zahradnik
"Fluidization of juvenile oysters: a progress report," (1970), Proceedings of the Nat'l. Shell-fisheries Assoc., Vol. 60. June (with L. F. Whitney).

J. W. Zahradnik
"Proposed 50 bushel pilot plant for oyster production," (1970), Proceedings of the Nat'l. Shell-fisheries Assoc., Vol. 60. June (with C. A. Johnson).

J. W. Zahradnik
"Food engineering - from which to build the future," (1970), Agric. Engr., p. 230. April.

J. W. Zahradnik
"Theoretical evaluation of combined irradiation and thermal processes in cylindrical containers with gamma sources," (1971), Food Tech. In press. (with J. E. Manson and K. S. Purohit).

J. W. Zahradnik
"Computer evaluation of irradiation processes in cylindrical containers with gamma sources," (1971), Food Tech. In press. (with K. S. Purohit and J. E. Manson).

J. W. Zahradnik
"Testing leaks in C-A storage chambers," (1969), Agr. Engr. 11 686.

J. W. Zahradnik
"Analog simulation of a time-sharer automatically controlled C-A apple storage," (1970), Trans. ASAE 5, 574-576 (with J. E. Manson and R. J. Novak).

J. W. Zahradnik
"Evaluation of lethality and nutrient retentions of conduction - heating foods in rectangular containers," (1970), Food Tech. 11, 109-113.

I Faculty Publication and Patents

(vii) Industrial Engineering & Operations Research

R. D. Davis

1. "A Practical Method for Collecting and Displaying Information Regarding Student Locations", accepted for publication by Socio-Economic Planning Services.

R. J. Giglio

1. "A Methodology for Determing Optimal Longitudinal Spacing of Effluent Discharges Into A River", Proceedings of 8th Annual Meeting of Society of Engineering Science, Inc., November 1970.

2. R. J. Giglio, F. C. Kaminsky, R. F. Rikkers, D. D. Adrian "Regional Wastewater Management Systems", pp. 229-239 in Developments in Water Quality Research, Proceedings of the Jerusalem International Conference on Water Quality and Pollution Research, edited by H. I. Shuval, Ann Arbor - Humphrey Science Publishers, 1970.

F. C. Kaminsky

1. "Analytic Scheduling of Small Nursing Teams" accepted for publication International Journal of Production Research (with E. J. Rising)

S. Lippert

1. "Travel in Nursing Units", accepted August 1970 for publication in Human Factors. Date of publication not yet known. Estimated 1971.

H. J. Miser

1. "The Economics of Noise Abatement and Control", published in The Noise Around Us: Including Technical Backup, Report of the Panel on Noise Abatement to the Commerce Technical Advisory Board, U. S. Department of Commerce, September 1970, pp. 119-137.

2. "Professional Practice in Operations and Systems Research" accepted for publication in the Fall 1971 in Operations Research.

C. L. Moodie

1. "Quantitative Methods in Discrete-Part Production Control", Chapter 13 in Production and Inventory Control Handbook, McGraw-Hill, 1970.

2. "An Evaluation of Some Patrol Allocation Methods", accepted for publication in POLICE (with J. L. Carlin).

3. "A Branch and Bound Algorithm for Minimizing Cost in Project Scheduling" (with A. T. Mason), accepted for publication in Management Science.

R. F. Rikkers

1. "Multi-Time Period Location, Distribution Problems: A Heuristic Algorithm", submitted to Management Science (with H. S. Bhalla), February 1971.

2. "Effect of Spoke Design of an Inpatient Unit on Occupancy: A Simulation Model", accepted for Fall 1970 publication in Health Services Research.

E. J. Rising

1. "Analytic Scheduling of Small Nursing Teams" accepted for publication International Journal of Production Research (with F. C. Kaminsky).

R. W. Trueswell

1. "Are Industrial Engineering Students Getting Their Money's Worth?" Spring 1971 Issue of the COGWHEEL.

2. "Industrial Engineering.....that has something to do with drafting" Fall 1970 Issue of the COGWHEEL.

II Papers Presented

R. J. Giglio

1. Invited paper presented at Engineering Foundation Conference on Urban Water Problems, July 1970. Title: "Technical Needs of a Regional Planner".

S. Lippert

1. Invited paper for Annual Human Factors Meeting, October 1970, "Travel in Nursing Units".

C. L. Moodie

1. "Effect of Control Capabilities on the Ultimate Management Structure" (with R. N. Millern), invited paper 1971 IFAC Symposium.

III Grants

R. J. Giglio

1. Water Resources Grant, A Methodology for Planning Optimal Waste-water Management Systems, $236,471 (with D. D. Adrian, R. F. Rikkers, and F. C. Kaminsky), expires June 20, 1971.

E. J. Rising

1. Albany Medical College, Outpatient Clinic Study, September 1970, $33,570 (with F. C. Kaminsky and R. J. Giglio).

IV Consulting and Other Professional Activities

R. D. Davis

Referee for Operations Research (Journal of the Operations Research Society of America).

R. J. Giglio

Gave seminar and participated in the course for other departments in the University (Agricultural, Economics and Public Health).

F. C. Kaminsky

Referee for the Operations Research Society of America

Editorial Board for publications of AIIE

Community Service Member -- Board of Directors -- Deerfield River Valley Conservation Association -- Provided engineering assistance in the study of the proposed Meadow Dam by the Army Corps of Engineers -- Hydrology and statistical assistance was the primary contribution.

Chairman, Buckland-Colrain-Shelburne Mathematics Review Committee for elementary education

K. E. Kroner

Program coordinator and chairman of national meeting of Engineering Design Graphics Division of ASEE, convening at UMass, November, 1970

Member of Executive Committee, Engineering Design Graphics Division, ASEE

Advertising Manager, Engineering Design Graphics Journal (Term expires June'72)

H. J. Miser

Consultant to Dr. Warren G. Stoker, Vice President and Dean of the Rensselaer Polytechnic Institute of Connecticut - June, 1970

Chairman of the Evaluation Panel for the Technical Analysis Division of the Institute for Applied Technology of the National Bureau of Standards

Attended meetings of the Advisory Committee of Institute for Man and His Environment at UMass

Editor of Operations Research Journal

H. J. Miser (continuation)

Review and approval process of 300 page report The Noise Around Us: Findings and Recommendations, Report of the Panel on Noise Abatement to the Commerce Technical Advisory Board, U.S. Department of Commerce, September, 1970

Member of the Commerce Technical Advisory Board Panel on Noise Abatement

Member of the National Research Council as the representative of the Operations Research Society of America

Chairman, National Academy of Sciences Evaluation Panel for the Technical Analysis Division of the Institute of Applied Technology, National Bureau of Standards

Represented the National Academy of Sciences and Evaluation Panel for the Institute of Applied Technology and spoke for it at a meeting of the NBS Statutory Visiting Committee on May 6, 1971

Member of a blue-ribbon panel of the Operations Research Society of America to investigate alleged professional malpractice during the 1969 Congressional hearings on defense policy

Participated in a Management Development Program sponsored by the National Association of Mutual Savings Banks and gave four lectures on "Science and Social Problems", July, 1970

Consulting with Center for the Environment and Man, Inc.

Delivered the banquet keynote address on "Operations Research in Business: The Implications for Education" at a Conference on Mathematics Curricula for the Undergraduate Student of Business Administration, Husson College, Bangor, Maine on December 4, 1970

Toastmaster at the concluding banquet of the International Cost-Effectiveness Conference sponsored by the International Federation of Operational Research Societies on April 15, 1971

Richard W. Trueswell

Consulting-Management Information Systems for Production Costs-Nonotuck Manufacturing Company, South Hadley, Massachusetts

Alpha Pi Mu President, Industrial Engineering Honor Society

Richard W. Trueswell (continuation)

American Institute of Industrial Engineers - Director of Pre-College Student Relations for AIIE on national basis

Engineers' Council for Profession Development

a) Inspector for Industrial Engineering (Inspected the Industrial Engineering curricula at Pratt Institute, University of Florida, Gainesville, and West Virginia U

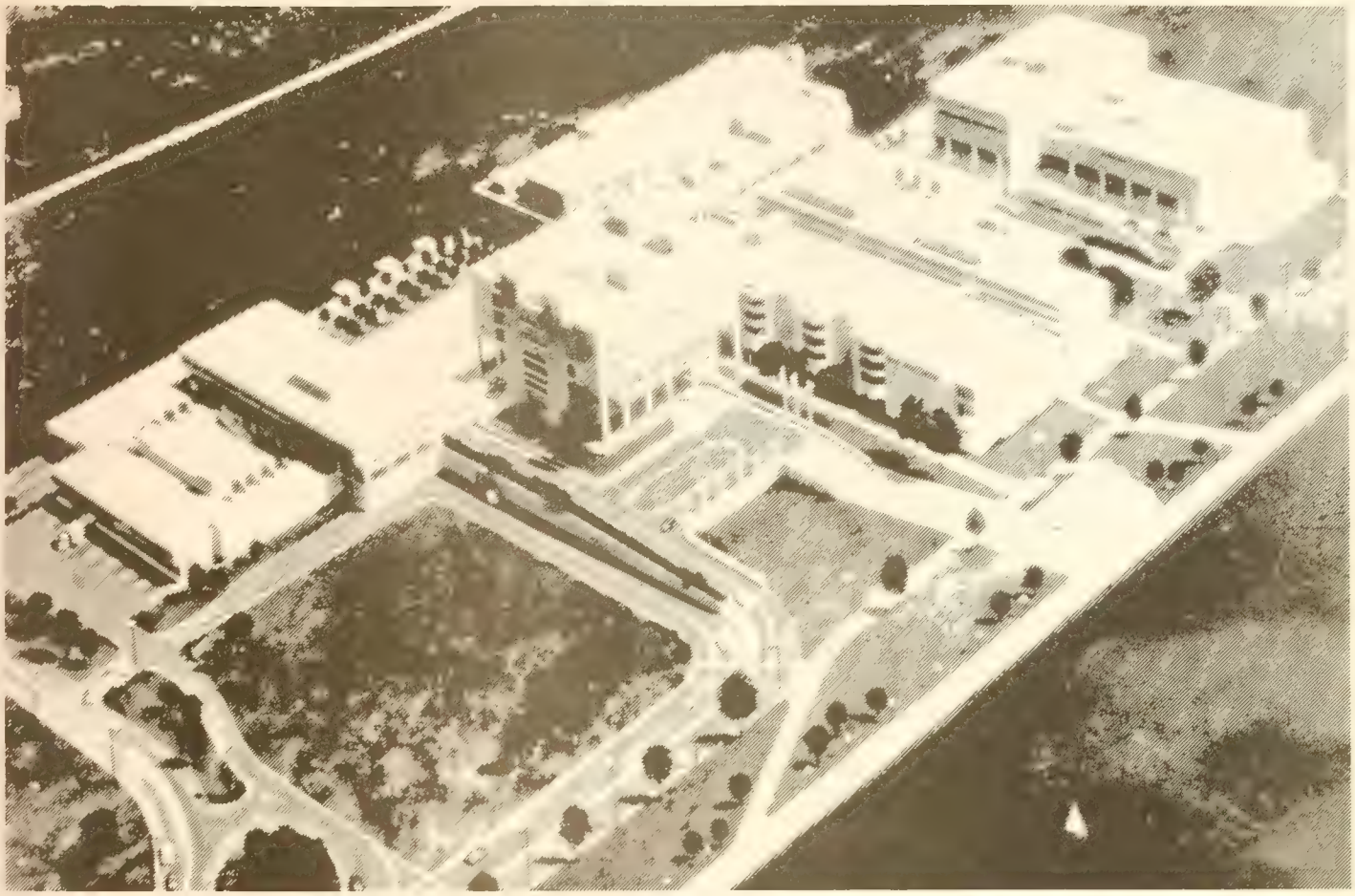
b) Committee member of the ECPD Guidance Committee representing AIIE

American Society for Information Science

Liaison representative of ASIS to the American Institute of Industrial Engineers

Air Force Cambridge Research Labs of AF Systems Command

Participation in their library systems automation activities



FINANCIAL REPORT

FOR THE YEAR ENDED JUNE 30, 1971

THE UNIVERSITY OF MASSACHUSETTS
Amherst . Boston . Worcester

COVER PHOTO: Architect's concept depicting Phase I of construction at the Columbia Point campus of the University of Massachusetts at Boston.

UNIVERSITY OF MASSACHUSETTS

Amherst Boston Worcester

FINANCIAL REPORT

FOR THE YEAR ENDED JUNE 30, 1971

Kenneth W. Johnson
Treasurer

BOARD OF TRUSTEES

Robert M. Abrams	Holyoke
Frank Learoyd Boyden	Deerfield
Kevin R. Carman, Student Member, Boston Campus	Cambridge
Edmund J. Croce	Worcester
Dennis Michael Crowley	Boston
Robert D. Gordon	Lincoln
John William Haigis, Jr.	Greenfield
Joseph P. Healey	Arlington
Mrs. Eliot S. Knowles	South Dartmouth
Lorenzo D. Lambson	Southwick
John J. Maginnis	Worcester
George L. Pumphret	Dorchester
Mrs. George R. Rowland	Osterville
Lee H. Sandwen, Student Member, Amherst Campus	Amherst
Alan Shaler	Easthampton
Mrs. O. Phillip Snowden	Roxbury
Frederick S. Troy	Boston
Most Reverend Christopher Joseph Weldon	Springfield

MEMBERS EX OFFICIO

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Robert C. Wood, President of the University	Lincoln
Nathan Chandler, Commissioner of Agriculture	Sterling Junction
Alfred L. Frechette, Commissioner of Public Health	Brookline
Milton Greenblatt, M. D., Commissioner of Mental Health	Newton
Merle L. Howes, Chairman, Board of Selectmen	Amherst
Henry W. Kolbe, M. D., Commissioner of Public Health	Walpole
Neil V. Sullivan, Commissioner of Education	Boston

OFFICERS OF THE BOARD

Joseph P. Healey, Chairman	Arlington
Frank Learoyd Boyden, Honorary Chairman	Deerfield
Robert J. McCartney, Secretary	Amherst
Kenneth W. Johnson, Treasurer	Amherst

OFFICERS OF THE UNIVERSITY

Robert C. Wood, President
Oswald Tippo, Chancellor, University of Massachusetts, Amherst to October 1, 1971
Francis L. Broderick, Chancellor, University of Massachusetts, Boston
Lamar Soutter, Dean of the School of Medicine, Worcester
Robert J. McCartney, Secretary
Kenneth W. Johnson, Treasurer
Robert H. Brand, Associate Treasurer
William H. Maus, Controller

TABLE OF CONTENTS

		Schedule	Page
I	Balance Sheet		1
II	Summary of Receipts and Expenditures		4
III	Maintenance Appropriation - 3 Year Comparison of Expenditures		6
IV	Office of the President		
	State Funds		
	Appropriation Comparison by Subsidiary Account	A-1	8
	Summary of Expenditures by Functional Division	A-2	9
	Endowment Funds		
	Summary of Investments	C-1	10
	Investment Pool - Principal	C-2	11
	Non-Pooled Investments - Principal	C-3	13
	Trust Funds		
	Statement of Income and Expenses	F-1	14
V	Amherst		
	State Funds		
	Income Statement	A-4	16
	Appropriation Comparison by Subsidiary Account	A-5	17
	Capital Outlay Appropriation Held by BBC	A-6	18
	Other State Appropriations	A-7	19
	Summary of Appropriations, Encumbrances, Expenditures and Balances by Functional Division	A-8	20
	Expenditure Report by Budget Division	A-9	22
	Capital Outlay Expenditure Report	A-10	30
	Federal Funds		
	Statement of Income and Expenses	B-1	31
	Endowment Funds		
	Principal	C-4	32
	Income	C-5	34
	Student Loan Funds		
	Federal and Trust Fund Loans Statement	D-1	36
	Building Authority		
	Statement of Income and Expenses	E-1	37

	Schedule	Page
V Amherst (Continued)		
Trust Funds		
Statement of Income and Expenses	F-2	40
Athletic Funds Statement	F-3	84
Boarding Hall Statement	F-4	86
Recognized Student Organizations	F-5	87
Student Health Statement	F-6	88
Campus Center - University Store - Income and Expenditures	F-7	89
University Store - Balance Sheet	F-8	90
Food Service - Income and Expenses	F-9	91
Food Service - Balance Sheet	F-10	92
General Fund - Income and Expenses	F-11	93
M & O Fund - Balance Sheet	F-12	94
Amortization Fund	F-13	95
Project #11 - Accommodations Services - Income and Expenses	F-14	96
Project #11 - Accommodations Services - Balance Sheet	F-15	97
Project #11 - Parking Garage - Income and Expenses	F-16	98
Project #11 - Parking Garage - Balance Sheet	F-17	99
Project #11 - Student Fee Revenue Account - Account Statement	F-18	100
Real Estate		
Inventory of Lands	G-1	101
Inventory of Buildings and Structures	G-2	101
Inventory of Buildings and Structures Other Than Buildings	G-3	107
VI Boston		
State Funds		
Income Statements	A-11	109
Appropriation Comparison by Subsidiary Account	A-12	110
Summary of Appropriations, Encumbrances, Expenditures and Balances by Functional Division	A-13	111
Expenditure Report by Budget Division	A-14	112
Capital Outlay Expenditure Report	A-15	113
Capital Outlay Appropriation Held by BBC	A-16	114
Endowment Funds		
Principal	C-6	115
Income	C-7	115
Student Loan Funds		
Federal and Trust Fund Loans Statement	D-2	116
Trust Funds		
Statement of Income and Expenses	F-19	117
Campus Center - University Store - Income and Expenditures	F-20	123
University Store - Balance Sheet	F-21	124
Real Estate		
Inventory of Lands	G-4	125
Inventory of Buildings and Structures	G-5	125

	Schedule	Page
VII Worcester - Medical School		
State Funds		
Income Statements	A-17	127
Appropriation Comparison by Subsidiary Account	A-18	128
Capital Outlay Appropriation Held by BBC	A-19	129
Summary of Appropriations, Encumbrances, Expenditures and Balances by Functional Division	A-20	130
Expenditure Report by Functional Division	A-21	131
Capital Outlay Expenditure Report	A-22	132
Trust Funds		
Statement of Income and Expenses	F-22	133
Real Estate		
Inventory of Lands	G-6	136
Inventory of Buildings and Structures	G-7	136

Audit

In accordance with state law, all accounts of the University are examined each year by the State Auditor. The last audit covered the period of this report from July 1, 1970 to June 30, 1971.

Balance Sheet as of June 30, 1971

ASSETS			LIABILITIES, RESERVES AND FUND BALANCES		
STATE FUNDS					
Appropriation Balances held by State Treasurer:					
Maintenance	$ 590,866.78		Amherst Appropriation Balance	$1,663,513.03	
Other Maintenance	146,947.57		Boston Appropriation Balance	6,394,684.73	
Capital Outlay	8,051,791.34		Worcester Appropriation Balance	731,490.95	
Federal Grant and State Technical Service	83.02				
Total Appropriation Balance		$ 8,789,688.71	Total Appropriation Balance		$ 8,789,688.71
Accounts Receivable		10,835.73	Funds Due State Treasurer		10,835.73
		$ 8,800,524.44			$ 8,800,524.44
FEDERAL FUNDS					
Cash-First National Bank of Amherst	$ 758,574.80		Balance Federal Appropriations	$ 726,962.98	
Cash-Hampshire National Bank	25,000.00		National Defense Loan Fund	3,384,164.86	
Notes Receivable-Nat'l Defense Student Loans	3,345,542.17		Nursing Student Loan Program	115,884.07	
Notes Receivable-Nursing loan Program	101,361.77		Health Profession Student Loan	5,614.33	
Notes Receivable-Health Profession Loans	2,406.00		Unpaid Check Fund	258.50	
		$ 4,232,884.74			$ 4,232,884.74
ENDOWMENT FUNDS					
Income-First National Bank of Amherst-Checking Account	$ 75,834.98		Income on Investments-Amherst	$ 94,832.07	
Income-Amherst Savings Bank	10,000.00		Income on Investments-Boston	76.21	
Income-First National Bank of Amherst-Trust Department	9,075.16		Unpaid Check Fund	1.86	
		$ 94,910.14			$ 94,910.14
Principal-First National Bank of Amherst-Trust Department	17,677.69		Principal of Fund-Amherst	1,385,058.80	
Principal-Amherst Savings Bank	2,531.79				
Principal-Pool Investments-Securities	1,328,050.66		Principal of Fund-Boston	1,796.02	
Investments in Land	152,905.40				
Unamortized Premium on Pool Investments	3,159.15		Reserve for Profit & Loss on Pooled Investments	117,469.87	
		1,504,324.69			1,504,324.69
		$ 1,599,234.83			$ 1,599,234.83

Balance Sheet as of June 30, 1971

U OF M TRUSTEE, U OF M BUILDING AUTHORITY

ASSETS			LIABILITIES, RESERVES AND FUND BALANCES		
First Project-First National Bank of Amherst	$ 12,878.28		First Project-Maintenance & Operating Account	$ 12,848.28	
			First Project-Unpaid Check Fund	30.00	
Second Project-First National Bank of Amherst	94,726.23		Second Project-Maintenance & Operating Account	94,696.23	
			Second Project-Unpaid Check Fund	30.00	
Fourth Project-First National Bank of Amherst	174,102.54		Fourth Project-Maintenance & Operating Account	173,897.54	
			Fourth Project-Unpaid Check Fund	205.00	
Sixth Project-First National Bank of Amherst	25,931.30		Sixth Project-Maintenance & Operating Account	25,931.30	
Eighth Project-First National Bank of Amherst	26,811.32		Eighth Project-Maintenance & Operating Account	26,811.32	
Tenth Project-First National Bank of Amherst	23,798.22		Tenth Project-Maintenance & Operating Account	23,798.22	
Eleventh Project-First National Bank of Amherst	329,873.58		Eleventh Project-Revenue Account	329,873.58	
Twelfth Project-First National Bank of Amherst	38,086.63		Twelfth Project-Maintenance & Operating Account	38,086.63	
Thirteenth Project-First National Bank of Amherst	59,723.04		Thirteenth Project-Maintenance & Operating Account	59,723.04	
		$ 785,931.14			$ 785,931.14

TRUST & AGENCY FUNDS

Operating Accounts:			Amherst-Federal Fellowships	$ 13,766.97	
Cash on Hand	$ 98,946.00		Amherst-Miscellaneous Fellowships	50,065.68	
First National Bank of Amherst	443,136.41		Amherst-Scholarships	61,149.23	
First National Bank of Boston	147,712.40		Amherst-Auxiliary Enterprises	1,296,438.11	
State Street Bank & Trust Company	5,543.02		Amherst-Clearing Accounts	(508,778.31)	
Worcester County National Bank	1,000.00		Amherst-General Purpose Fund	907,562.99	
Variable Interest:			Amherst-Gifts and Grants Pending Trustee Action	6,213.80	
First National Bank of Boston	1,097,555.38		Amherst-Library Funds	51,911.93	
Common Stock:			Amherst-Miscellaneous Service Fund	313,303.21	
136 shares Ocean Spray Cranberries, Inc.	3,075.00		Amherst-Student Program	458,117.73	
Preferred Stock:			Amherst-Sponsored Research	250,498.08	
104 shares Ocean Spray Cranberries, Inc. 4% preferred	1,900.00		Amherst-Faculty Research	59,732.38	
Government Bonds & Notes:			Amherst-Non-Profit Organizations & Foundations	449,335.61	
300,000 Federal Home Loan Banks 8.20% due 11/26/71	300,000.00		Amherst-Federal Grants & Contracts-Training	164,157.04	
300,000 Federal National Mortgage Assoc. 8.60% due 7/12/71	300,000.00		Amherst-Federal Grants & Contracts-Facilities	15,576.00	
250,000 Federal National Mortgage Assoc. 7.75% due 3/11/74	250,000.00		Amherst-Federal Grants & Contracts-Equipment	657.49	
			Amherst-Federal Grants & Contracts-Other	38,359.45	
			Amherst-Federal Grants & Contracts-Research	181,997.76	
					3,810,065.15

Balance Sheet as of June 30, 1971

ASSETS			LIABILITIES, RESERVES AND FUND BALANCES		
TRUST & AGENCY FUNDS (Continued)					
300,000 Federal National Mortgage Assoc. 8.45% due 10/12/71	$ 320,850.00		Boston-Scholarship	20,110.00	
Certificate of Deposits:			Boston-Auxiliary Enterprises	32,478.12	
National Shawmut Bank of Boston 9/20/71-7.50%	500,000.00		Boston-Clearing Account	642.00	
National Shawmut Bank of Boston 3/23/72-7.50%	500,000.00		Boston-General Purpose Fund	85,563.37	
Union National Bank of Lowell 5/20/72-6.00%	100,000.00		Boston-Gifts & Grants Pending Trustee Action	3,923.52	
90 Day Notice Savings Accounts:			Boston-Student Program	91,715.03	
Amherst Savings Bank	127,346.37		Boston-Sponsored Research	136.18	
Bay State Savings Bank	25,000.00		Boston-Non-Profit Organization & Foundation	58,906.86	
Berkshire County Savings Bank	23,576.15		Boston-Federal Grant & Contracts-Training	8,364.56	
Easthampton Savings Bank	35,000.00		Boston-Federal Grant & Contracts-Research	97.20	
Fall River Five Cent Savings Bank	25,000.00				$ 301,936.84
Lynn Institution for Savings	25,000.00		Worcester-Scholarship	2,762.61	
New Bedford Institution for Savings	26,313.50		Worcester-General Purpose Fund	33,926.11	
Provident Institution for Savings	15,000.00		Worcester-Library	125.00	
Springfield Five Cent Savings Bank	25,000.00		Worcester-Non-Profit Organization & Foundation	1,956.30	
Union Warren Savings Bank	25,000.00				$ 38,770.02
Ware Savings Bank	34,285.64		System-Clearing Account	1,000.00	
Woronoco Savings Bank	25,000.00		System-Non-Profit Organization & Foundation	5,600.08	
Savings Accounts:					$ 6,600.08
East Cambridge Savings Bank	17,106.67		Amherst-Agency	268,816.83	
			Boston-Agency	12,355.50	
			Worcester-Agency	280.00	
Total Cash & Securities		$ 4,498,346.54			$ 281,452.33
Advances from State Treasurer		2,610,147.83	Advances by State Treasurer		2,610,147.83
Notes Receivable		55,768.78	Student Loan Funds		115,290.90
		$ 7,164,263.15			$ 7,164,263.15
PLANT FUNDS					
Land		$ 6,448,520.00	Net Investment in Amherst Plant		$117,705,504.16
Buildings		75,887,067.00	Net Investment in Boston Plant		5,501,525.00
Improvements other than Buildings		15,996,552.16	Net Investment in Worcester Plant		1,088,353.00
Equipment		25,958,243.00			
		$124,290,382.16			$124,290,382.16
Total Assets		$146,873,220.46	Total Liabilities, Reserves and Fund Balances		$146,873,220.46

Summary of Receipts, Transfers and Balances

I. State Appropriation			
General Maintenance			
System	$ 100,000.00		
Amherst	47,571,160.00		
Boston	8,150,835.00		
Worcester	1,966,297.77		
Sub-Total		$57,788,292.77	
Other Maintenance			
Amherst	$ 1,815,834.11		
Boston	240,000.00		
Sub-Total		$ 2,055,834.11	
Capital Outlay			
Amherst	$ 2,452,170.75		
Boston	6,782,358.06		
Worcester	335,589.88		
Sub-Total		$ 9,570,118.69	
Total		$69,414,245.57	
Less: Balances Reverted to State Treasurer			
System	$ 127.35		
Amherst	38,958.68		
Boston	10,169.80		
Worcester	.06		
		49,255.89	
Net Total - State Appropriation			$ 69,364,989.68
II. Federal Appropriation			
Balance, July 1, 1970		$ 371,845.61	
Current Year Receipts		2,902,366.49	
Total Federal Appropriation			3,274,212.10
III. Endowment Income			
Balance, July 1, 1970		$ 97,015.85	
University Income - Amherst		51,832.65	
Boston		71.35	
State Income		5,078.91	
Transfers		67,707.17	
Total Income			221,705.93
IV. Student Loan Funds			
Balance, July 1, 1970		$ 3,109,064.65	
Interest Income & Additions		542,622.41	
Total		$ 3,651,687.06	
Less: Loans Cancelled		33,287.57	
Net Total			3,618,399.49
V. U of M Trustee for U of M Building Authority			
Balance, July 1, 1970		$ 145,803.71	
Current Year Receipts		8,245,389.64	
Transfers		2,060,739.63	
Total			10,451,932.98
VI. Trust & Agency Funds			
Balance, July 1, 1970		$ 5,602,926.07	
Current Year Receipts:			
Amherst	$46,155,897.59		
Boston	1,330,499.58		
Worcester	14,366.00		
System	7,789,277.98		
Sub-Total		$55,290,041.15	
Total			60,892,967.22
Total - Receipts, Transfers, and Balances			$147,824,207.40

Summary of Expenditures, Transfers and Balances

	System	Amherst	Boston	Worcester	Total
I. State Appropriation					
Administration	$99,872.65	$ 3,205,989.74	$ 2,356,335.07	$ 731,470.25	$ 6,393,667.71
Instruction	-0-	34,279,035.99	5,227,949.92	505,344.42	40,012,330.33
Experiment Station	-0-	872,718.05	-0-	-0-	872,718.05
Extension Service	-0-	984,279.89	-0-	-0-	984,279.89
Control Service	-0-	467,125.43	-0-	-0-	467,125.43
Operation of Plant	-0-	7,735,875.89	559,212.62	138,616.32	8,433,704.83
Sub-Total	$99,872.65	$47,545,024.99	$ 8,143,497.61	$1,375,430.99	$ 57,163,826.24
Other Maintenance	-0-	1,656,286.27	237,172.12	-0-	1,893,458.39
Capital Outlay	-0-	935,464.91	387,668.80	194,965.65	1,518,099.36
Total State Appropriation Expenditure	$99,872.65	$50,136,776.17	$ 8,768,338.53	$1,570,396.64	$ 60,575,383.99
Balance - State Appropriation, June 30, 1971	-0-	1,663,430.01	6,394,684.73	731,490.95	8,789,605.69
Total	$99,872.65	$51,800,206.18	$15,163,023.26	$2,301,887.59	$ 69,364,989.68
II. Federal Appropriations					
Expenditures		$ 2,547,249.12			
Balance, June 30, 1971		726,962.98			
Total					$ 3,274,212.10
III. Endowment Income					
Expenditures		$ 59,090.48			
Transfers		67,707.17			
Balance, June 30, 1971		94,908.28			
Total					$ 221,705.93
IV. Student Loan Funds					
Amherst, June 30, 1971 Balance		$ 3,614,154.16			
Boston, June 30, 1971 Balance		4,245.33			
Total					$ 3,618,399.49
V. U of M Trustee for U of M Building Authority					
Expenditures		$ 7,605,262.21			
Transfers		2,060,739.63			
Balance, June 30, 1971		785,931.14			
Total					$ 10,451,932.98
VI. Trust and Agency Funds					
Revolving Accounts - Expenditures		$51,881,031.23			
Agency Account Expenditures		4,573,111.57			
Sub Total		$56,454,142.80			
Balance, June 30, 1971		4,438,824.42			
Total					$ 60,892,967.22
Total - Expenditures, Transfers and Balances					$147,824,207.40

State General Maintenance Appropriation

Comparative Statement of Expenditures by Year

Amherst - Boston - Worcester - System

By Budgetary Division
for all Campuses

Division	1969 Amount	1969 % of Total	1970 Amount	1970 % of Total	1971 Amount	1971 % of Total
Administration	$ 3,461,063.91	8.81	$ 4,299,919.01	9.04	$ 6,393,667.71	11.18
Instruction	26,753,462.62	68.12	32,864,648.80	69.13	40,012,330.33	70.00
Extension Service	626,625.64	1.60	773,252.26	1.63	872,718.05	1.53
Experiment Station	1,184,924.24	3.02	1,416,811.99	2.98	984,279.89	1.72
Control Service	374,404.22	.95	468,670.48	.99	467,125.43	.82
Operation of Plant	6,871,132.54	17.50	7,716,769.23	16.23	8,433,704.83	14.75
Total	$39,271,613.17	100.00	$47,540,071.77	100.00	$57,163,826.24	100.00

By Subsidiary Account
for all Campuses

Code No.	Account	1969	1970	1971
01	Salaries	$21,720,679.98	$34,966,670.49	$41,290,517.20
02	Salaries, Other	6,429,341.55	594,187.63	660,203.37
03	Service, Non-Employees	4,539,571.55	5,248,251.90	6,757,404.42
04	Food	1,009.79	1,047.41	860.00
05	Clothing	5,978.59	7,940.56	5,999.58
06	Housekeeping Supplies and Expense	96,594.04	93,029.78	110,549.36
07	Lab. Med. and General Care	12,991.66	12,978.27	15,173.97
08	Heat and Other Plant Operations	1,287,847.59	1,339,270.44	1,779,847.25
09	Farm and Grounds	119,965.62	119,892.87	116,834.77
10	Travel and Automotive Expenses	223,000.64	240,979.08	242,753.35
11	Advertising and Printing	167,946.31	219,104.88	207,810.64
12	Repairs, Alterations and Additions	627,485.86	636,378.56	836,294.66
13	Special Supplies and Expenses	907,540.46	855,669.51	1,233,774.91
14	Office and Administrative Expenses	599,798.18	661,041.19	736,976.08
15	Equipment	659,085.87	642,844.17	926,757.67
16	Rentals	1,872,775.48	1,936,785.03	2,242,069.01
	Total	$39,271,613.17	$47,540,071.77	$57,163,826.24

UNIVERSITY OF MASSACHUSETTS

Office of the President

Schedule A-1

State Appropriations

Comparative Statement by Subsidiary Account

Subsidiary Account		1969	1970	1971
General Maintenance				
7410-1001-10	Travel and Automotive Expenditures	-0-	-0-	$ 3,000.00
7410-1001-11	Advertising and Printing	-0-	-0-	2,200.00
7410-1001-14	Office and Administrative Expenses	-0-	-0-	14,300.00
7410-1001-15	Equipment	-0-	-0-	31,500.00
7410-1001-16	Rentals	-0-	-0-	49,000.00
	Total	-0-	-0-	$100,000.00

Authorized by Chapter 833 of the Acts of 1970.

Schedule A-2

State General Maintenance Appropriations

Summary of Expenditures by Functional Division and Subsidiary Accounts

Account Number and Name		Appropriation and Allotment	Expenditures & Encumbrances for Administration	Reverted to State Treasurer	Balance of Appropriations June 30, 1971
General Maintenance					
7410-1001-10	Travel & Automative	$ 3,000.00	$ 2,997.64	$ 2.36	-0-
7410-1001-11	Advertising & Printing	2,200.00	2,179.43	20.57	-0-
7410-1001-14	Office & Administrative	14,300.00	14,292.39	7.61	-0-
7410-1001-15	Equipment	31,500.00	31,403.40	96.60	-0-
7410-1001-16	Rental	49,000.00	48,999.79	.21	-0-
	Total	$100,000.00	$99,872.65	$127.35	-0-

Schedule C-1

Endowment Funds - Summary of Investments

as of June 30, 1971

	Cost or Book Value		% of Total	
Pooled Investments:				
Bonds and Notes				
Government	$124,738.78		8.29	
Public Utilities	237,441.57		15.78	
Industrial	121,367.98		8.07	
		$ 483,548.33		32.14
Mortgages		7,000.00		.47
Preferred Stock		57,374.06		3.81
Common Stock				
Financial	147,037.81		9.77	
Industrial	568,904.43		37.82	
Utilities	67,345.18		4.48	
		783,287.42		52.07
Total Pooled Securities		1,331,209.81		88.49
Cash				
Uninvested Cash	17,677.69		1.18	
Savings Account	2,531.79		.17	
Total Cash		20,209.48		1.35
Total Pooled Investments		1,351,419.28		89.84
Non-Pooled Investments:				
Land				
Lincoln Land in Ohio		152,905.40		10.16
		$1,504,324.68		100.00

Endowment Funds - Principal

Statement of Pooled Investments
as of June 30, 1971

Description	Date of Acquisition	Cost or Book Value	Market Value
Government Bonds and Notes			
35,000 U.S. Treasury 4 1/8's due February 15, 1974	8/14/67	$ 34,792.19	$ 32,965.63
40,000 U. S. Treasury 7 1/2's due August 15, 1976	12/31/70	40,797.84	41,100.00
25,000 Federal National Mortgage Association 5.20's due January 19, 1977	9/22/67	24,125.00	22,500.00
25,000 International Bank for Reconstruction and Development 4 1/2's due February 1, 1990	7/15/65	25,023.75	17,625.00
Total Government Bonds and Notes		$ 124,738.78	$ 114,190.63
Public Utility Bonds			
20,000 American Telephone and Telegraph Company debenture 4 3/8's due May 1, 1999	7/10/63	$ 20,038.88	$ 12,325.00
25,000 Boston Edison Company First Mortgage 6 1/8's due June 1, 1997, Series J	9/22/68	25,541.68	20,468.75
25,000 Central Hudson Gas and Electric Corp. 5 3/4's due February 1, 1978	3/3/71	25,000.00	23,500.00
20,000 Commonwealth Edison Company First Mortgage V 5 1/4's due April 1, 1996	7/25/66	19,875.00	15,125.00
25,000 Florida Power and Light Company First Mortgage 4 3/8's due December 1, 1986	2/6/59 7/16/68	21,800.00	17,718.75
25,000 Florida Power and Light Company First Mortgage 7's due June 1, 1998	6/30/68	25,618.77	22,750.00
25,000 Philadelphia Electric Company First and Refunding Mortgage 4 5/8's due September 1, 1987	11/26/57 7/16/68	22,198.36	18,500.00
10,000 Public Service Electric and Gas Company First and Refunding Mortgage 4 5/8's due August 1, 1988	10/6/58	10,212.50	6,862.50
25,000 Southern Bell Telephone Company debenture 4 3/8's due April 1, 2001	7/15/65	24,437.50	15,093.75
4,000 Southern National Gas Company First Mortgage Pipe Line Sinking Fund 4 3/4's due January 1, 1979	4/24/59	4,106.71	3,185.00
20,000 Southern California Edison Company First Refunding 4 1/2's due February 15, 1990	7/15/65	20,057.00	13,350.00
20,000 Southwestern Bell Telephone Company debenture 4 3/4's due October 1, 1992	10/17/58 12/18/58 6/30/68	18,555.17	13,900.00
Total Public Utility Bonds		$ 237,441.57	$ 182,778.75
Industrial Bonds			
25,000 General Motors Acceptance Corporation debenture 4 5/8's due June 15, 1986	7/6/64 12/31/70	$ 23,856.73	$ 18,062.50
25,000 Gulf Oil Corporation debenture 5.35's due June 15, 1991	7/25/66 12/31/71	23,865.00	19,125.00
25,000 National Lead Company 7 1/2's due December 15, 1995	5/7/71	24,812.50	23,250.00
25,000 Shell Oil Corporation Sinking Fund debenture 4 5/8's due August 1, 1986	8/3/61 12/31/70	23,968.75	18,750.00
25,000 Sun Oil Company 8 1/2's due November 15, 2000	12/31/70	24,865.00	26,000.00
Total Industrial Bonds		$ 121,367.98	$ 105,187.50
Mortgages			
Theta Corporation of Theta Chi Fraternity 4%	10/9/54	$ 7,000.00	$ 7,000.00
Total Mortgages		$ 7,000.00	$ 7,000.00

Endowment Funds - Principal

Statement of Pooled Investments
as of June 30, 1971

No. of Shares	Description	Date of Acquisition	Cost or Book Value	Market Value
	Preferred Stock			
288	F. A. Bartlett Tree Expert Company	6/20/66	$ 7,200.00	$ 7,200.00*
250	General Signal	6/30/70	23,704.89	27,250.00
900	U. S. Plywood-Champion Papers, Inc. $1.20 Conv. Pfd.	12/31/70	26,469.17	27,000.00
	Total Preferred Stock		$ 57,374.06	$ 61,450.00
	Common Stock			
	Financial			
223	Bankers Trust New York Corp.	6/20/66	$ 14,021.13	$ 12,376.50
2102	First Banc Group of Ohio, Inc.	5/4/71	75,146.50	76,723.00
600	First National City Corp.	5/11/65-7/1/65-6/30/71	18,328.55	20,700.00
80	National Casualty Company	5/4/71	3,920.00	3,920.00*
767	Nationwide Corporation Class A Common	6/1/71	8,341.13	8,628.75
32	Nationwide Life Insurance Company	6/4/71	816.00	768.00
800	Travelers Corp.	5/19/67-9/22/67	26,464.50	29,200.00
	Total Common Stock - Financial		$ 147,037.81	$ 152,316.25
	Industrial			
700	Addressograph-Multigraph Corp.	12/18/68-12/31/70	$ 35,750.77	$ 30,450.00
1000	Alleghany Corporation	6/1/71	14,937.50	14,000.00
750	American Metal Climax, Inc.	12/26/63-12/18/68	21,639.68	25,125.00
6	Bartlett Realty Co., Inc.	6/20/66	13,926.00	13,926.00*
1000	Bartlett Tree Expert Company	6/20/66	57,000.00	57,000.00*
700	Continental Can Company	6/30/69-3/31/71	31,262.31	25,900.00
200	E. I. duPont de Nemours and Company	7/19/51-2/3/59-12/31/70	11,655.24	27,600.00
800	Federated Department Stores	12/18/68-6/30/69	28,216.65	36,800.00
372	General Electric Company	7/14/61-6/25/64-6/20/66-6/30/71	14,335.47	22,134.00
600	General Foods Corporation	6/30/69-3/31/71	23,803.17	22,500.00
301	General Motors Corporation	12/31/63-1/6/65-6/20/66	24,825.69	23,628.50
800	Goodyear Tire & Rubber Company	12/26/63-5/19/67	17,324.31	26,000.00
604	Gulf Oil Corp.	7/7/61-12/29/61-6/20/66-12/31/68	14,838.96	18,724.00
400	Hercules, Inc.	5/5/65	17,914.76	19,200.00
100	I. B. M. Corp.	9/30/66-9/30/67-12/18/68-3/31/71	23,221.13	31,400.00
800	Kimberly-Clark Corporation	6/1/71	27,400.00	24,800.00
400	Magnovox	6/30/69	18,316.76	20,200.00
300	Mobil Oil Corp.	6/20/66	12,060.54	16,500.00
200	Minnesota Mining and Mfg. Co.	10/6/67	18,021.22	24,150.00
500	J. C. Penney Company	9/30/66-12/31/68	14,508.44	32,375.00
1050	Charles Pfizer and Company	9/30/66-12/18/68	24,021.00	40,425.00
300	Smith, Kline and French Lab.	7/26/68	15,357.69	15,600.00
609	Standard Oil Company of New Jersey	7/19/51-12/26/63-9/30/66	25,422.30	45,675.00
700	Wells Fargo & Co.	3/31/71	30,913.59	26,600.00
300	Xerox Corporation	5/7/71	32,231.25	34,200.00
	Total Common Stock - Industrial		$ 568,904.43	$ 674,912.50
	Utility			
858	American Telephone and Telegraph Co.	7/19/51-1/19/65	$ 25,566.43	$ 38,610.00
440	Baltimore Gas and Electric Co.	5/2/57-11/24/59-6/30/69	8,234.76	13,420.00
394	Commonwealth Edison Company	7/19/51-12/31/64	7,894.60	14,578.00
800	Southern Company	5/2/57-6/20/66	17,102.62	19,200.00
1200	Virginia Electric Power Company	1/31/54-12/26/63	8,546.77	26,400.00
	Total Common Stock - Utility		$ 67,345.18	$ 112,208.00
	Total Pooled Investments		$1,331,209.81	$1,410,043.63

*Book Value - no quotation available

Schedule C-3

Endowment Funds - Principal

Statement of Investment Not in Pool Fund
as of June 30, 1971

Land	Date of Acquisition	Cost or Book Value
Murray D. Lincoln	3/11/58	$ 41,765.00
	12/31/58	16,795.00
	2/23/60	33,600.00
	2/28/61	24,068.90
	1/17/62	36,676.50
Total - Land		$152,905.40

Schedule F-1

UNIVERSITY OF MASSACHUSETTS CENTRAL ADMINISTRATION
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 07 CLEARING ACCOUNT

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
FIRST NATIONAL BANK OF AMHERST	C 029003	125.00CR	638,923.54	.00	638,798.54	.00	A12
FIRST NATIONAL BANK OF BOSTON	C 029005	.00	7,140,854.44	.00	7,140,854.44	.00	A12
PRESIDENTS PETTY CASH FUND/SYSTEM	C 034800	.00	1,000.00	.00	1,000.00	.00	A12
PRESIDENTS PETTY CASH CONTRA	C 034801	.00	1,000.00	.00	.00	1,000.00	A12
SECT-07 CLEARING ACCOUNT		125.00CR	7,781,777.98	.00	7,780,652.98	1,000.00	

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS

THE AMERICAN ASSEMBLY	C 042990	.00	7,500.00	.00	1,899.92	5,600.08	A12
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS		.00	7,500.00	.00	1,899.92	5,600.08	

SUMMARY OF ALL SECTIONS

SECT-07 CLEARING ACCOUNT	125.00CR	7,781,777.98	.00	7,780,652.98	1,000.00
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS	.00	7,500.00	.00	1,899.92	5,600.08
TOTALS FOR TRUST FUNDS-- SECTIONS 06-20	125.00CR	7,789,277.98	.00	7,782,552.90	6,600.08
TOTALS FOR TRUST FUNDS-- SECTIONS 03-20	125.00CR	7,789,277.98	.00	7,782,552.90	6,600.08
GRAND TOTALS FOR TRUST AND AGENCY FUNDS	125.00CR	7,789,277.98	.00	7,782,552.90	6,600.08

UNIVERSITY OF MASSACHUSETTS

at Amherst

Schedule A-4

Comparative Statement of Funds Forwarded to State Treasurer

on Account of Income from Fees, Sales and Services

	1969		1970		1971	
Instruction						
Tuition - Amherst	$3,163,575.59		$3,385,772.11		$3,628,788.72	
Tuition - Summer School - Amherst	264,913.80		173,381.50		202,764.10	
Sales - Productive Enterprise	65,381.56		68,668.72		66,421.19	
Other Student Receipts	19,881.56		18,015.00		14,790.00	
Other Sales	50,628.86		54,694.32		5,775.00	
Reimbursement for Services - Federal Government	2,979.00		4,098.00			
		$3,567,360.37		$3,704,629.65		$3,962,821.06
Extension Services						
Miscellaneous		120.91		6.10		-0-
Experiment Station						
Sales	3,699.18		8,200.75		7,049.31	
Waltham Field Station	17.00		14.00		19.90	
		3,716.18		8,214.75		7,069.21
Control Services						
Fertilizer Law	19,939.62		19,391.78		19,794.88	
Poultry Disease Law	17,608.95		16,648.65		16,241.95	
Dairy Glassware	556.35		698.25		306.25	
Commercial Feedstuffs	27,380.00		27,578.85		30,200.00	
Seed Law	986.25		1,088.00		668.25	
Dairy Cattle Certification	15.50		-0-		-0-	
Drivers of Bulk Milk Trucks	92.00		148.00		124.00	
M. G. Control Testing	20,972.70		22,565.00		20,165.65	
		87,551.37		88,118.53		87,500.98
Operation of Plant						
Students' Room Rent	443,801.77		448,231.60		427,663.59	
Employee's Rent	78,962.73		94,443.90		22,892.13	
Other Rents	10,793.74		6,073.26		7,367.49	
Miscellaneous	101,774.72		2,386.63		2,897.15	
Reimbursements for Services - Boarding Halls	245,000.00		245,000.00		245,000.00	
		880,332.96		796,125.39		705,820.72
Miscellaneous						
Other	54,291.06		29,525.04		43,833.90	
Reimbrusement for Services - Other than Federal Government - Research Projects	-0-		123,101.37		87,244.23	
		54,291.06		152,626.41		131,078.13
		$4,593,372.85		$4,749,720.83		$4,894,290.10

State Appropriations

Comparative Statement by Subsidiary Accounts

Subsidiary Account		1969	1970	1971
General Maintenance				
7410-0000-01	Salaries, Permanent Positions	$18,932,000.00	$30,630,920.00	$35,450,190.00
7410-0000-02	Salaries, Other	5,911,000.00	496,025.00	584,395.00
7410-0000-03	Services, Non-Employees	3,709,000.00	4,384,080.00	5,456,000.00
7410-0000-04	Food for Persons	1,020.00	1,050.00	860.00
7410-0000-05	Clothing	6,000.00	8,000.00	6,000.00
7410-0000-06	Housekeeping Supplies and Expenses	95,000.00	91,500.00	104,500.00
7410-0000-07	Laboratory, Medical and General Care	10,000.00	10,000.00	12,000.00
7410-0000-08	Heat and Other Plant Operations	1,200,000.00	1,260,000.00	1,671,650.00
7410-0000-09	Farm and Grounds	120,000.00	120,000.00	116,800.00
7410-0000-10	Travel and Automotive Expenses	188,000.00	179,950.00	208,125.00
7410-0000-11	Advertising and Printing	140,000.00	150,000.00	156,015.00
7410-0000-12	Repairs, Alterations and Additions	600,000.00	600,250.00	760,000.00
7410-0000-13	Special Supplies and Expenses	687,000.00	683,975.00	866,000.00
7410-0000-14	Office and Administrative Expenses	513,480.00	570,000.00	593,375.00
7410-0000-15	Equipment	472,000.00	389,900.00	590,000.00
7410-0000-16	Rentals	950,000.00	950,000.00	995,250.00
	Total	$33,534,500.00	$40,525,650.00	$47,571,160.00
Other Maintenance				
7410-9704-13	For Certain Scholarships	$ 700,000.00	$ 850,000.00	$ 850,000.00
7411-1012-14	Entertainment of Distinguished Visitors	1,000.00	1,000.00	1,000.00
7411-0002-16	Rent Fee Chancellor's House	1,200.00	1,200.00	1,200.00
7411-2000-03	Disadvantaged Students	50,000.00	100,000.00	51,800.00
7411-2000-13	Disadvantaged Students	100,000.00	200,000.00	248,200.00
7411-1006-15	Equipment Matching	100,000.00	-0-	100,000.00
7410-9705-13	Library Books	200,000.00	200,000.00	200,000.00
7411-1003-03	Senior Internship	35,000.00	35,000.00	35,000.00
7411-1004-03	Legislative Internship	9,000.00	35,000.00	35,000.00
7414-1107-03	Technical Services	175,000.00	171,038.93	106,047.14
1070-2441-03	Inland Fish and Game	8,500.00	8,500.00	8,500.00
1070-2341-03	Fisheries and Cooperative Research	10,000.00	10,000.00	10,000.00
7414-1002-00	Receipts Projects	235,791.72	198,877.67	169,086.97
	Total	$ 1,625,491.72	$ 1,910,616.60	$ 1,815,834.11
Capital Outlay				
7490-0059-00	Acquisition of Land	$ 100,000.00	$ -0-	$ -0-
7490-0060-00	Library Books	500,000.00	-0-	-0-
7490-0061-00	Construction of Avian Biology Building	105,000.00	-0-	-0-
7490-0084-00	Renovation of Older Buildings	74,895.21	-0-	-0-
7490-0090-00	Renovation of Older Buildings	218,000.00	-0-	-0-
7490-0101-00	Improvements and Additions to Power Plant	200,000.00	-0-	-0-
7490-0110-00	Library Books	-0-	-0-	2,000,000.00
	Total	$ 1,197,895.21	$ -0-	$ 2,000,000.00
	Grand Total	$36,357,886.93	$42,436,266.60	$51,386,994.11

Authorized by Chapter 480 of the Acts of 1970, also Chapter 833 of the Acts of 1970 and Chapter 427 of the Acts of 1971.

Schedule A-6

Capital Outlay Appropriations

Under Supervision and Control of the

Bureau of Building Construction

8071-62	For the construction of a new boiler plant at the Tillson farm site and for certain lighting and utility distribution systems improvements, including the cost of furnishings and equipment; to be in addition only to the amount appropriated in item 8069-64 of section two of chapter four hundred and seventy-six of the acts of nineteen hundred and sixty-eight	$9,000,000
8071-63	For the preparation of plans for the completion of the remaining two towers of the graduate research center; total cost of the completed graduate research center project not to exceed twenty-nine million two hundred thousand dollars	310,000
8071-85	For the purchase and installation of modular classroom and office components and certain site development and utilities connections therefor, including the cost of furnishings and equipment	2,000,000

Authorized by Chapter 633 of the Acts of 1970

Schedule A-7

Other Continuing State Appropriations

Name and Account Number	Grant	Encumbrance	Expended	June 30, 1971
Federal Grant Held by State Treasurer				
Grant #4550-09 New Facilities for Research and Graduate Training - Morrill Science Center - Movable Property	$54.82	-0-	-0-	$54.82
State Technical Service Grant				
Grant #4550-00 State Technical Services Act of 1965	28.20	-0-	-0-	28.20
Total	$83.02	-0-	-0-	$83.02

Schedule A-8

State General

Summary of Expenditures by

Maintenance Appropriation

Functional Division and Subsidiary Account

Account Number and Name		Appropriation and Allotment	Expenditures and Encumbrances: Administration	Instruction	Extension Service	Experiment Station	Control Service	Operation of Plant	Total Expenditures and Enc.	Reverted to State Treasurer	Balance of Appropriation June 30, 1971
General Maintenance											
7410-0000-01	Salaries, Permanent Positions	$35,450,190.00	$2,210,699.84	$26,990,561.32	$861,087.21	$861,426.30	$374,295.61	$4,151,570.39	$35,449,640.67	$ 549.33	$ -0
7410-0000-02	Salaries, Other	584,395.00	35,020.17	254,344.64	194.37	71,253.06	49,144.72	159,531.33	569,488.29	14,906.71	-0-
7410-0000-03	Services, Non-Employees	5,456,000.00	270,029.93	4,965,559.25	767.50	8,670.68	18,538.87	191,992.40	5,455,558.63	441.37	-0-
7410-0000-04	Food for Persons	860.00	-0-	860.00	-0-	-0-	-0-	-0-	860.00	-0-	-0-
7410-0000-05	Clothing	6,000.00	-0-	5,413.38	-0-	28.50	-0-	557.70	5,999.58	.42	-0-
7410-0000-06	Housekeeping Supplies and Expenses	104,500.00	-0-	4,307.62	-0-	400.00	-0-	99,782.25	104,489.87	10.13	0
7410-0000-07	Laboratory, Medical and General Care	12,000.00	-0-	11,994.85	-0-	-0-	-0-	-0-	11,994.85	5.15	-0-
7410-0000-08	Heat and Other Plant Operations	1,671,650.00	-0-	-0-	-0-	-0-	-0-	1,671,461.49	1,671,461.49	188.51	-0-
7410-0000-09	Farm and Grounds	116,800.00	-0-	64,902.03	50.00	8,113.92	491.05	43,231.86	116,788.86	11.14	-0-
7410-0000-10	Travel and Automotive Expenses	208,125.00	20,239.76	123,727.03	1,278.99	6,220.71	10,894.15	45,666.57	208,027.21	97.79	-0
7410-0000-11	Advertising and Printing	156,015.00	123,069.60	32,650.84	-0-	-0-	-0-	229.90	155,950.34	64.66	-0-
7410-0000-12	Repairs, Alterations and Additions	760,000.00	12,625.75	129,291.07	1,064.24	5,615.36	1,323.84	609,890.44	759,810.70	189.30	-0-
7410-0000-13	Special Supplies and Expenses	866,000.00	89,289.88	672,020.48	738.26	2,061.52	10,254.04	90,674.12	865,038.30	961.70	-0-
7410-0000-14	Office and Administrative Expenses	593,375.00	75,558.93	384,573.60	7,529.48	14,302.00	2,783.15	101,659.29	585,806.45	7,568.55	-0-
7410-0000-15	Equipment	590,000.00	39,691.97	477,093.74	-0-	406.10	-0-	71,853.91	589,045.72	954.28	0
7410-0000-16	Rentals	995,250.00	329,763.91	161,736.14	8.00	5,781.74	-0-	497,774.24	995,064.03	185.97	-0-
	Total	$47,571,160.00	$3,205,989.74	$34,279,035.99	$872,718.05	$984,279.89	$467,125.43	$7,735,875.89	$47,545,024.99	$26,135.01	$ -0
Other Maintenance											
7410-9704-13	Scholarships	$ 850,000.00	$ -0-	$ 849,334.05	$ -0-	$ -0-	$ -0-	$ -0-	$ 849,334.05	$ 665.95	$ -0-
7411-1012-14	Entertainment of Distinguished Visitors	1,000.00	1,000.00	-0-	-0-	-0-	-0-	-0-	1,000.00	-0-	-0-
7411-0002-16	Rent - Chancellor's House	1,200.00	-0-	-0-	-0-	-0-	-0-	-0-	-0-	1,200.00	-0
7411-2000-03	Disadvantaged Students	51,800.00	-0-	51,782.88	-0-	-0-	-0-	-0-	51,782.88	17.12	0
7411-2000-13	Disadvantaged Students	248,200.00	-0-	248,199.70	-0-	-0-	-0-	-0-	248,199.70	.30	0
7411-1006-15	Equipment Matching	100,000.00	-0-	99,999.79	-0-	-0-	-0-	-0-	99,999.79	.21	-0-
7410-9705-13	Library Books	200,000.00	-0-	199,590.48	-0-	-0-	-0-	-0-	199,590.48	409.52	-0-
7411-1003-03	Senior Internship	35,000.00	-0-	34,599.07	-0-	-0-	-0-	-0-	34,599.07	400.93	-0-
7411-1004-03	Legislative Internship	35,000.00	-0-	25,094.20	-0-	-0-	-0-	-0-	25,094.20	9,905.80	-0-
7414-1107-03	Technical Services	106,047.14	-0-	58,213.92	-0-	-0-	-0-	-0-	58,213.92	-0-	+7,833.22
1070-2441-03	Inland Fish and Game	8,500.00	-0-	8,499.56	-0-	-0-	-0-	-0-	8,499.56	.44	0-
1070-2341-03	Fisheries and Cooperative Research	10,000.00	-0-	10,000.00	-0-	-0-	-0-	-0-	10,000.00	-0-	-0-
7414-1002-00	Receipts Projects	169,086.97	-0-	69,972.62	-0-	-0-	-0-	-0-	69,972.62	-0-	99,114.35
	Total	$ 1,815,834.11	$ 1,000.00	$ 1,655,286.27	$ -0-	$ -0-	$ -0-	$ -0-	$ 1,656,286.27	$12,600.27	$146,947.57
	Grand Total	$49,386,994.11	$3,206,989.74	$35,934,322.26	$872,718.05	$984,279.89	$467,125.43	$7,735,875.89	$49,201,311.26	$38,735.28	$146,947.57

(a) Balances carried forward to Fiscal Year 1972

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
A	PUBLIC AFFAIRS				
AA1	NEWS BUREAU	44,060.63	10,181.34	.00	54,241.97
AA2	PUBLICATIONS OFFICE	74,342.57	122,995.78	.00	197,338.35
AA3	PHOTOGRAPHIC SECTION	57,380.34	3,572.60	757.60	61,710.54
AA4	FILM CENTER	1,119.00	1,988.95	.00	3,107.95
AA5	DEVELOPMENT	42,081.83	512.98	49,345.52	91,940.33
AA6	RADIO STATION WFCR-FM	91,514.28	3,645.61	41,162.90	136,322.79
AA7	TELEVISION	1,231.00	302.22	192.00	1,725.22
AB1	OFFICE OF THE CHANCELLOR	310,819.77	28,908.52	90.50	339,818.79
AB2	OFFICE OF THE DEAN OF ADMINISTRATION	945.00	961.66	.00	1,906.66
AB3	OFFICE OF BUDGETING AND INST. STUDIES	40,890.24	4,412.82	.00	45,303.06
	A TOTALS	664,384.66	177,482.48	91,548.52	933,415.66
A	PRESIDENT'S OFFICE - AMHERST				
A11	TRUSTEES	14,022.58	2,043.91	.00	16,066.49
A12	OFFICE OF THE PRESIDENT	274,689.79	32,892.69	18,307.31	325,889.79
A13	OFFICE OF THE SECRETARY	42,912.54	5,710.21	.00	48,622.75
	A TOTALS	331,624.91	40,646.81	18,307.31	390,579.03
B	VICE CHANCELLOR FOR ADMINISTRATION				
B11	TREASURER'S OFFICE	976,231.09	435,536.89	104,440.69	1,516,208.67
B12	BUSINESS AND PERSONNEL OFFICE	395,454.40	25,668.41	54,023.59	475,146.40
B14	CAMPUS SECURITY	.00	181.87	.00	181.87
B16	DUPLICATING SERVICE	70,599.63	9,557.74	42,034.52	122,191.89
B17	CENTRAL MAILING	77,455.25	1,165.60	2,651.52	81,272.37
	B TOTALS	1,519,740.37	472,110.51	203,150.32	2,195,001.20
D	ORCHARD HILL RESIDENTIAL COLLEGE				
DD1	ORCHARD HILL RESIDENTIAL COLLEGE	10,492.70	1,580.35	3,914.69	15,987.74
DD5	SOUTHWEST RESIDENTIAL COLLEGE	27,111.09	2,148.47	11,591.41	40,850.97
	D TOTALS	37,603.79	3,728.82	15,506.10	56,838.71
E	VICE CHANCELLOR FOR ACADEMIC AFFAIRS				
E11	PROVOST'S OFFICE	290,730.76	106,450.55	46,529.50	443,710.81
E13	FOUR-COLLEGE PROGRAMS	3,887.84	6,500.00	.00	10,387.84
E14	BOWKER AUDITORIUM	776.40	519.06	.00	1,295.46
E15	CALENDAR OFFICE	76,878.45	3,367.01	2,238.09	82,483.55
E16	INTERNATIONAL PROGRAMS	4,638.81	1,549.46	.00	6,188.27
E17	GRADUATE ASSISTANTS	2,219,398.34	7.68	.00	2,219,406.02
E18	NANTUCKET RESEARCH CENTER	7,447.70	495.43	.00	7,943.13

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
E19	FINE ARTS COUNCIL	4,917.10	2.26	21,041.28	25,960.64
E20	SPECIAL PROGRAMS	22,401.70	58.59	218,179.55	240,639.84
E21	BLACK CULTURAL CENTER	370.00	1,323.45	.00	1,693.45
E22	FACULTY SENATE	214.40	520.04	.00	734.44
E23	MARCHING BAND	208.00	1,431.80	.00	1,639.80
E25	HONORS PROGRAM	2,094.10	.00	.00	2,094.10
	E TOTALS	2,633,963.60	122,225.33	287,988.42	3,044,177.35
F	VICE CHANCELLOR FOR STUDENT AFFAIRS				
FF5	SECURITY	568,271.03	13,613.08	31,576.41	613,460.52
F21	DEAN OF STUDENTS	116,938.24	20,226.15	126.00	137,290.39
F22	DEAN OF MEN	16,846.91	1,791.80	7,229.54	25,868.25
F23	DEAN OF WOMEN	.00	116.18	100.62	216.80
F24	PLACEMENT OFF AND FINANCIAL AID SERV	138,038.84	9,172.02	20,220.57	167,431.43
F26	COUNCILING AND GUIDANCE SERVICE	183,953.81	8,875.19	57,456.12	250,285.12
F27	ASSOCIATE DEAN OF STUDENTS	817,284.77	19,782.41	85,398.07	922,465.25
F28	TESTING AND COUNCILING	.00	.00	11,965.00	11,965.00
F29	HOUSING OFFICE	14.23	28.11	.00	42.34
F30	ADMISSIONS AND REGISTRAR	351,203.14	46,578.34	1,646.00	399,427.48
F42	OFF-CAMPUS WORK STUDY	.00	.00	122,218.90	122,218.90
F43	SUMMER WORK STUDY PROGRAM	.00	.00	28,558.97	28,558.97
F50	CAMPUS SECURITY	.00	45.00CR	21,983.47	21,938.47
	F TOTALS	2,192,550.97	120,138.28	388,479.67	2,701,168.92
G	LIBRARY				
G11	LIBRARY	1,447,345.14	185,270.84	20,846.32	1,653,462.30
G12	BOARD OF HIGHER EDUCATION	28,190.33CR	28,172.45CR	.00	56,362.78CR
	G TOTALS	1,419,154.81	157,098.39	20,846.32	1,597,099.52
H	AUDIO-VISUAL CENTER:				
H11	AUDIO-VISUAL CENTER	82,950.20	18,117.77	67,634.17	168,702.14
	H TOTALS	82,950.20	18,117.77	67,634.17	168,702.14
J	COLLEGE OF ARTS AND SCIENCES				
J11	DEAN OF ARTS AND SCIENCES	265,566.78	59,752.91	126.00	325,445.69
J12	ECONOMICS	460,113.61	13,133.21	33,646.35	506,893.17
J13	BUREAU OF GOVERNMENT RESEARCH	84,181.12	2,003.71	17,945.81	104,130.64
J14	ENGLISH	1,655,724.80	23,779.79	40,724.34	1,720,228.93
J15	SLAVIC LANGUAGES AND LITERATURE	116,406.52	1,980.47	.00	118,386.99
J16	GERMANIC LANGUAGES AND LITERATURE	370,743.37	6,525.16	11,998.90	389,267.43
J17	GOVERNMENT	546,204.53	11,610.49	61,544.77	619,359.79
J18	HISTORY	694,161.12	13,658.10	19,324.86	727,144.08

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
J19	MUSIC	368,765.72	44,770.94	2,015.20	415,551.86
J20	PHILOSOPHY	277,169.86	4,301.86	8,199.17	289,670.89
J21	PSYCHOLOGY	882,508.10	50,961.26	276,289.78	1,209,759.14
J22	BIOCHEMISTRY	135,717.06	12,474.46	87,164.88	235,356.40
J23	FRENCH, ITALIAN & CLASSICS	684,403.92	9,250.62	10,632.82	704,287.36
J24	SOCIOLOGY	521,622.95	15,137.32	21,819.19	558,579.46
J25	SPEECH	705,772.87	49,254.88	35,290.57	790,318.32
J26	ART	483,299.30	27,689.04	7,358.00	518,346.34
J27	ANTHROPOLOGY	218,877.31	13,278.38	2,070.75	234,226.44
J28	ACADEMIC THEATER	.00	35.75CR	.00	35.75CR
J29	LANGUAGE LABORATORIES	19,153.66	1,703.98	.00	20,857.64
J30	HISPANIC LANGUAGES AND LITERATURES	160,055.83	5,935.28	2,036.16	168,027.27
J32	MICROBIOLOGY	243,225.97	39,209.42	134,438.71	416,874.10
J33	BOTANY	412,866.60	44,246.72	63,190.90	520,304.22
J34	CHEMISTRY	841,087.50	106,610.08	246,355.69	1,194,053.27
J35	GEOGRAPHY	14,453.02	2,305.85	1,312.70	18,071.57
J36	GEOLOGY	383,624.86	44,592.45	62,596.87	490,814.18
J37	MATHEMATICS AND STATISTICS	1,300,619.49	20,158.86	93,274.52	1,414,052.87
J38	PHYSICS AND ASTRONOMY	1,010,522.22	77,784.72	565,447.20	1,653,754.14
J39	ZOOLOGY	573,605.98	71,203.66	243,527.55	888,337.19
J41	ASTRONOMY - FOUR COLLEGE	3,798.88	695.00	.00	4,493.88
J42	COMPARATIVE LITERATURE	107,011.43	3,487.83	3,472.65	113,971.91
J43	RHETORIC	3,177.70	506.97	.00	3,684.67
J44	LINQUISTICS PROGRAM	78,370.23	3,105.17	583.75	82,059.15
J50	AFRO-AMERICAN STUDIES	120,410.81	5,710.53	111.20	126,232.54
J51	ASIAN STUDIES PROGRAM	35,119.46	1,873.97	618.75	37,612.18
	J TOTALS	13,778,342.58	788,657.34	2,053,118.04	16,620,117.96
K	COLLEGE OF AGRICULTURE				
K01	ADMINISTRATION	99,851.40	1,358.75	.00	101,210.15
K03	AGRICULTURAL AND FOOD ECONOMICS	181,619.73	4,703.87	399.00	186,722.60
K04	AGRICULTURAL ENGINEERING	146,463.98	4,749.92	1,167.00	152,380.90
K07	ENTOMOLOGY	139,206.22	4,659.73	600.00	144,465.95
K08	RESEARCH AND PRODUCTION SERVICE	21,513.40	21,552.63	7.98	43,074.01
K09	PLANT AND SOIL SCIENCES	399,740.59	30,950.08	11,567.72	442,258.39
K10	FOOD SCIENCE AND TECHNOLOGY	274,692.73	5,721.93	7,213.63	287,628.29
K11	FORESTRY AND WILDLIFE MANAGEMENT	194,230.66	14,752.90	12,667.87	221,651.43
K12	LANDSCAPE ARCHITECTURE	269,992.14	8,028.82	400.00	278,420.96
K13	ENVIRONMENTAL SCIENCES	79,388.49	9,184.06	2,034.82	90,607.37
K15	VETERINARY AND ANIMAL SCIENCES	489,070.54	82,462.81	11,639.49	583,172.84
K16	PLANT PATHOLOGY	50,938.86	1,412.22	2,437.45	54,788.53
K17	RESTAURANT AND HOTEL ADMINISTRATION	108,814.60	5,422.69	1,280.81	115,518.10
	K TOTALS	2,455,523.34	194,960.41	51,415.77	2,701,899.52
K	EXTENSION SERVICE				
K21	ADMINISTRATION	111,698.91	2,421.57	928,237.59	1,042,358.07
K23	AGRICULTURAL AND FOOD ECONOMICS	75,860.46	728.26	51,848.60	128,437.32
K24	AGRICULTURAL ENGINEERING	32,144.62	688.12	12,019.43	44,852.17
K27	RESEARCH AND PRODUCTION SERVICES	25,836.99	.00	5,942.85	31,779.84
K28	CRANBERRY STATION	65,546.52	52.30CR	13,189.44	78,683.66

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
K29	ENTOMOLOGY	24,959.95	425.49	11,865.94	37,251.38
K30	PLANT AND SOIL SCIENCES	110,136.29	1,122.08	26,123.20	137,381.57
K31	FOOD SCIENCE AND TECHNOLOGY	21,019.02	524.60	.00	21,543.62
K32	FORESTRY AND WILDLIFE MANAGEMENT	21,800.08	793.71	14,303.28	36,897.07
K33	4-H	46,820.52	896.21	100,656.93	148,373.66
K35	LANDSCAPE ARCHITECTURE	.00	.00	3,740.00	3,740.00
K38	VETERINARY AND ANIMAL SCIENCES	70,496.71	1,527.86	57,405.51	129,430.08
K40	ENVIRONMENTAL SCIENCES	202,703.69	917.67	73,146.73	276,768.09
K41	PLANT PATHOLOGY	43,530.70	440.72	8,610.00	52,581.42
K42	RESTAURANT AND HOTEL ADMINISTRATION	9,494.62	234.98	10,515.60	20,245.20
	K TOTALS	862,049.08	10,668.97	1,317,605.10	2,190,323.15
K	REASEARCH				
K51	ADMINISTRATION	33,958.55	1,722.49	17,551.34	53,232.38
K53	AGRICULTURAL AND FOOD ECONOMICS	27,134.79	893.46	109,770.78	137,799.03
K54	AGRICULTURAL ENGINEERING	34,061.49	730.59	75,862.09	110,654.17
K57	ENVIRONMENTAL SCIENCES (AMHERST)	22,186.48	1,110.78	124,036.78	147,334.04
K60	CRANBERRY STATION	102,341.01	7,874.44	74,365.47	184,580.92
K62	ENTOMOLOGY	8,187.46	150.39	20,968.11	29,305.96
K63	RESEARCH AND PRODUCTION SERVICE	34,365.29	861.89	14.08	35,241.26
K64	PLANT AND SOIL SCIENCES	115,879.59	3,309.35	119,059.39	238,248.33
K65	FOOD SCIENCE AND TECHNOLOGY	30,041.17	464.65	144,963.73	175,469.55
K66	FORESTRY AND WILDLIFE MANAGEMENT	157,400.11	3,495.07	101,715.24	262,610.42
K68	LANDSCAPE ARCHITECTURE	.00	.00	3,259.88	3,259.88
K71	VETERINARY AND ANIMAL SCIENCES	186,384.45	5,824.05	125,722.98	317,931.48
K73	ENVIRONMENTAL SCIENCES (WALTHAM)	151,783.21	16,262.29	91,390.41	259,435.91
K75	NATURAL RESOURCES PROJECT #3-35-R	2,453.21	.00	188.30	2,641.51
K76	PLANT PATHOLOGY	35,173.23	230.40	25,322.15	60,725.78
	K TOTALS	941,350.04	42,929.85	1,034,190.73	2,018,470.62
K	CONTROL SERVICE				
K81	SEED LAB	43,342.05	29.62	.00	43,371.67
K82	MASTITIS CONTROL	48,067.42	2,004.55	.00	50,071.97
K84	FEED, SEED, FERTILIZER AND DAIRY LAW	101,329.00	5,390.91	.00	106,719.91
K85	SHADE TREE LABS	86,658.87	4,085.79	.00	90,744.66
K86	PULLORUM CONTROL	150,366.81	13,440.46	.00	163,807.27
K87	M. G. CONTROL	7,447.70	.00	.00	7,447.70
K88	ENVIRONMENTAL SCIENCE	4,767.35	194.90	.00	4,962.25
	K TOTALS	441,979.20	25,146.23	.00	467,125.43
	K TOTALS	4,700,901.66	273,705.46	2,403,211.60	7,377,818.72
L	SCHOOL OF BUSINESS ADMINISTRATION				
L11	DEAN OF BUSINESS ADMINISTRATION	159,277.07	30,772.92	55,009.55	245,059.54
L12	ACCOUNTING	310,525.45	1,401.94	2,193.75	314,121.14
L13	GENERAL BUSINESS AND FINANCE	399,969.57	1,531.38	24,522.03	426,022.98

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
L14	MANAGEMENT	329,293.83	1,598.02	11,919.04	342,810.89
L15	MARKETING	226,012.73	1,514.19	7,291.77	234,818.69
L16	CENTER FOR BUSINESS AND ECONOMIC RES	49,279.47	312.42	2,934.08	52,525.97
	L TOTALS	1,474,358.12	37,130.87	103,870.22	1,615,359.21
M	SCHOOL OF ENGINEERING				
M11	DEAN OF ENGINEERING	196,229.56	26,569.84	29,299.78	252,099.18
M12	CHEMICAL ENGINEERING	329,670.06	27,054.80	113,973.41	470,698.27
M13	CIVIL ENGINEERING	473,137.87	24,826.67	235,592.63	733,557.17
M14	MECHANICAL AND AEROSPACE ENGINEERING	579,778.58	28,006.45	113,298.80	721,083.83
M15	ELECTRICAL ENGINEERING	450,116.57	30,145.48	93,705.77	573,967.82
M16	INDUSTRIAL ENGINEERING	220,389.72	6,653.12	18,579.44	245,622.28
M18	STSA-MASS 6801-DAI (PHASE I)	.00	.00	7,372.25	7,372.25
	M TOTALS	2,249,322.36	143,256.36	611,822.08	3,004,400.80
N	SCHOOL OF HOME ECONOMICS				
N11	DEAN OF HOME ECONOMICS	97,567.82	8,065.66	175.20	105,808.68
N12	HOME ECONOMICS EXTENSION	88,207.57	998.18	56,565.78	145,771.53
N13	NUTRITION AND FOOD	88,009.17	3,220.71	5,630.74	96,860.62
N14	HOME ECONOMICS EDUCATION	35,871.72	1,314.36	189.60	37,375.68
N15	HUMAN DEVELOPMENT	97,452.47	1,998.82	2,948.90	102,400.19
N16	MANAGEMENT AND FAMILY ECONOMICS	336.41	357.66	.00	694.07
N17	TEXT, CLOTH & ENVIRONMENTAL ARTS	83,986.37	2,164.65	849.90	87,000.92
	N TOTALS	491,431.53	18,120.04	66,360.12	575,911.69
O	SCHOOL OF NURSING				
O11	SCHOOL OF NURSING	445,278.65	26,190.14	71,041.95	542,510.74
	O TOTALS	445,278.65	26,190.14	71,041.95	542,510.74
P	DEPARTMENT OF ATHLETICS:				
P11	DEAN OF PHYSICAL EDUCATION	271,313.12	58,453.15	.00	329,766.27
P12	PHYSICAL EDUCATION FOR MEN	310,121.45	3,734.80	5,673.60	319,529.85
P13	PHYSICAL EDUCATION FOR WOMEN	278,044.83	4,662.61	4,448.97	287,156.41
P14	ATHLETICS AND INTRAMURALS	358,827.22	8,794.08	526,199.84	893,821.14
P15	RECREATION	59,642.49	1,628.66	.00	61,271.15
	P TOTALS	1,277,949.11	77,273.30	536,322.41	1,891,544.82
Q	SCHOOL OF EDUCATION				

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
Q11	SCHOOL OF EDUCATION	1,652,690.77	118,206.86	1,658,368.89	3,429,266.52
	Q TOTALS	1,652,690.77	118,206.86	1,658,368.89	3,429,266.52
R	ROTC				
RA1	AIR ROTC	7,897.50	1,332.09	.00	9,229.59
RB1	ARMY ROTC	18,140.91	1,111.77	.00	19,252.68
	R TOTALS	26,038.41	2,443.86	.00	28,482.27
S	GRADUATE SCHOOL				
S11	GRADUATE SCHOOL MANAGEMENT	153,320.41	4,828.41CR	35,876.35	184,368.35
S12	COMPUTER SCIENCE	132,989.88	38,337.77	30,095.51	201,423.16
S13	RESEARCH COMPUTING CENTER	176,176.54	92,249.93	233,287.08	501,713.55
S14	WATER RESOURCES RESEARCH CENTER	26,976.54	179.43	159,321.75	186,477.72
S15	UNIV. OF MASSACHUSETTS PRESS	3,464.25	183.00	81,079.37	84,726.62
S16	OFFICE OF RESEARCH SERVICES	3,720.79	13,218.37	97,576.44	114,515.60
S17	POLYMER SCIENCE AND ENGINEERING	100,380.20	15,186.05	181,157.72	296,723.97
S18	MARINE SCIENCES PROGRAM	33,328.13	2,522.88	8,379.62	44,230.63
S19	MARINE STATION	1,049.40	.00	47,601.63	48,651.03
S20	ADMISSIONS OFFICE	37,371.62	9,238.90	3,908.68	50,519.20
S21	DATA PROCESSING OFFICE	8,512.43	1,699.25	2,520.45	12,732.13
S22	RECORDS & REGISTRATION OFFICE	13,459.00	4,687.78	14,154.43	32,301.21
S90	GRADUATE ASSISTANTS	59,759.73	.00	.00	59,759.73
S91	FELLOWSHIP SECTION	167,029.74	.00	10,711.98	177,741.72
	S TOTALS	917,538.66	172,674.95	905,671.01	1,995,884.62
T	LABOR RELATIONS AND RESEARCH CENTER				
T11	LABOR CENTER GENERAL FUND	90,175.74	9,963.87	77.86	100,217.47
T12	GRADUATE PROGRAM	85.70	1,993.54	.00	2,079.24
T13	GRADUATE ASSISTANTS	38,963.97	.00	.00	38,963.97
T14	FACULTY RESEARCH	799.96	32.93	155.00	987.89
T15	FEDERAL RESEARCH	.00	.00	28,826.75	28,826.75
T16	LABOR EDUCATION EXTENSION	10,406.81	3,597.27	.00	14,004.08
T17	LIBRARY AND PUBLICATIONS	7,403.75	1,759.86	.00	9,163.61
	T TOTALS	147,835.93	17,347.47	29,059.61	194,243.01
U	SUMMER SCHOOL AND CONTINUING EDUCATION				
U11	SUMMER SCHOOL:	672,559.09	1,673.17	1,432.62	675,664.88
U12	CONTINUING EDUCATION	18,756.70	321.21	137,996.88	157,074.79
	U TOTALS	691,315.79	1,994.38	139,429.50	832,739.67

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
V	UNIVERSITY HEALTH SERVICES				
V11	STUDENT HEALTH SERVICES	.00	.00	1,290,929.98	1,290,929.98
	V TOTALS	.00	.00	1,290,929.98	1,290,929.98
W	PUBLIC HEALTH				
WW1	PUBLIC HEALTH	168,779.97	9,914.61	73,115.30	251,809.88
WW2	PUB HL-ENVIRONMENTAL HL & SAFETY	66,416.62	14,892.48	320.00	81,629.10
	W TOTALS	235,196.59	24,807.09	73,435.30	333,438.98
X	PHYSICAL PLANT				
X01	CONTRACT, MAINTENANCE AND REPAIRS	34,162.94	206,899.05	.00	241,061.99
X02	UTILITY EXPENSES	.00	790,347.68	.00	790,347.68
X12	MATERIALS & SUPPLIES MAINT. & REPAIRS	.00	457,172.68	.00	457,172.68
X14	MATERIALS & SUPPLIES (CUSTODIAL)	.00	94,454.70	.00	94,454.70
X15	COLLEGE SUPPLY	.00	179,025.67	.00	179,025.67
X16	COAL AND FREIGHT	.00	762,381.45	.00	762,381.45
X20	PHYSICAL PLANT EXECUTIVE OFFICE	32,001.40	28,193.73	.00	60,195.13
X21	PHY PL ADM OFFICE	.00	483.82	.00	483.82
X22	ADMINISTRATION SECTION	2,097.40	252.75	9,484.45	11,834.60
X23	PERSONNEL/EMPLOYEE RELATIONS SECTION	25,860.80	2,259.68	17,531.56	45,652.04
X24	COMPTROLLER SECTION	64,424.09	2,676.89	35,239.56	102,340.54
X41	DESIGN ENGINEERING OFFICE	19,606.42	2,085.80	308.75	22,000.97
X42	LANDSCAPE ARCHITECTURE SECTION	42,477.14	31.00	783.87	43,292.01
X43	MECHANICAL ENGINEERING SECTION	76,330.92	968.06	1,414.12	78,713.10
X44	ELECTRICAL ENGINEERING SECTION	26,932.70	71.24	15,526.20	42,530.14
X45	ARCHITECTURAL SECTION	14,661.99	.00	653.70	15,315.69
X46	CIVIL ENGINEERING & DRAFTING SECTION	25,238.00	3,389.02	47,422.41	76,049.43
X47	SPECIFICATIONS SECTION	.00	613.84	20,137.86	20,751.70
X50	MNT	.00	430.95	.00	430.95
X51	PROJ ENG DIVISION OFFICE	17,667.03	234.86	5,980.70	23,882.59
X52	PROJECT SECTION	35,643.35	76.77	24,236.70	59,956.82
X61	AMHERST MAINTENANCE OFFICE	43,257.70	20,228.90	6,540.35	70,026.95
X62	TECHNICAL STAFF SECTION	28,936.79	108.92	31,534.09	60,579.80
X63	WORK CONTROL SECTION	95,498.44	557.75	33,998.72	130,054.91
X64	CENTRAL STORES SECTION	92,711.41	12,298.60	31,833.63	136,843.64
X65	TRANSPORTATION SECTION	128,690.48	42,212.62	25,615.92	196,519.02
X70	PROJECT SECTION	21,366.50	62.00	9,020.60	30,449.10
X71	PLUMBING SHOP	114,232.78	2,068.56	8,895.65	125,196.99
X72	CARPENTRY SHOP	162,374.91	4,153.08	71,024.01	237,552.00
X73	MASONRY SHOP	47,875.84	1,051.24	18,121.73	67,048.81
X74	PAINTING SHOP	183,927.71	3,676.30	88,318.97	275,922.98
X75	ELECTRICAL SHOP	150,752.64	655.79	44,171.86	195,580.29
X76	OPERATION SECTION	337,856.89	3,620.84	215,157.69	556,635.42
X77	GROUNDS AND SERVICES SECTION	682,816.25	25,488.54	111,746.25	820,051.04
X78	CUSTODIAL SECTION	1,082,501.23	6,521.01	140,736.06	1,229,758.30
X79	POWER PLANT	260,524.14	73,325.57	.00	333,849.71
X80	ROOFING AND SHEET METAL SHOP	37,152.50	56.48	34,996.02	72,205.00
X81	DORMITORIES-SOUTHWEST	220,145.40	840.04	280,966.53	501,951.97

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
X82	DORMITORIES-NORTHEAST	326,869.03	620.00	141,813.06	469,302.09
X92	NANTUCKET RESEARCH CENTER	4,000.00	1,789.42	.00	5,789.42
X93	WAREHAM CRANBERRY STATION	.00	7,529.90	.00	7,529.90
X94	WALTHAM FIELD STATION	47.00	7,637.75	.00	7,684.75
X95	WORCESTER MEDICAL SCHOOL	.00	71.95	.00	71.95
	X TOTALS	4,438,641.82	2,746,624.90	1,473,211.02	8,658,477.74
Y	BOARDING HALL				
Y11	EXPENSE	.00	.00	3,027,928.61	3,027,928.61
Y12	MATERIAL AND SUPPLIES	.00	.00	2,830,343.81	2,830,343.81
	Y TOTALS	.00	.00	5,858,272.42	5,858,272.42
Z	CAMPUS CENTER - STUDENT UNION				
Z11	GENERAL FUNDS	.00	2.00CR	768,914.44	768,912.44
Z12	FOOD SERVICE FUND	.00	5.80CR	593,709.16	593,703.36
Z13	UNIVERSITY STORE FUND	.00	.00	320,182.93	320,182.93
Z14	RECOGNIZED STUDENT ORGANIZATIONS	.00	.00	181,038.08	181,038.08
Z16	UMASS/BOSTON BOOKSTORE	.00	.00	42,055.06	42,055.06
Z17	STUDENT AUTOMATIC SERVICE TRUST FUND	.00	.00	25,505.63	25,505.63
Z18	WORK STUDY	.00	.00	13,469.03	13,469.03
Z19	GRADUATE STUDENT SENATE	.00	.00	745.50	745.50
	Z TOTALS	.00	7.80CR	1,945,619.83	1,945,612.03
DEPTS A - Z	TOTALS	41,408,815.29	5,559,973.61	20,313,204.81	67,281,993.71
3	ALLOTMENTS				
3	ALLOTMENTS	.00	.00	.00	.00
301	HOME ECONOMICS EVALUATION	4,000.00	.00	.00	4,000.00
302	STUDENT SENATE BUS SERVICE	16,922.96	.00	.00	16,922.96
303	PHYSICAL PLANT	36,529.34	.00	.00	36,529.34
304	MATCHING FEDERAL GRANTS	.00	22,200.00	.00	22,200.00
600	CENTRAL DUPLICATION SUPPLIES - CT.	.00	10,918.30CR	.00	10,918.30CR
700	CENTRAL DUPLICATION SUPPLIES	.00	5,145.69	.00	5,145.69
800	CLEARING ACCOUNT	8,420.00	720,568.66	.00	728,988.66
801	POSTAGE	.00	86,235.03	.00	86,235.03
803	TELEPHONE	.00	135,792.97CR	.00	135,792.97CR
900	GENERAL ACCOUNTS	.00	177,074.32CR	.00	177,074.32CR
	3 TOTALS	65,872.30	510,363.79	.00	576,236.09
	TOTALS	41,474,687.59	6,070,337.40	20,313,204.81	67,858,229.80

Schedule A-10

Capital Outlay Expenditures and Balances

Account Number and Name		Expires	Total Appropriation	Expenditures Prior Year	Expenditures Current Year	Reverted to State Treasurer	Balance of Appropriation June 30, 1971
7490-0080-00	Land Purchase	1968	$ 371,000.00	$ 366,500.00	$ 3,457.60	$ -0-	$ 1,042.40
7490-0016-00	Land Purchase	1968	300,000.00	298,539.88	750.00	-0-	710.12
7490-0018-00	Sidewalk, Parking, etc.	1969	1,000,000.00	997,982.43	1,921.18	21.60(a) 74.79	-0-
7490-0025-00	T.V. Computer, etc.	1970	1,000,000.00	999,252.42	583.00	95.19(a) 69.39	-0-
7490-0084-00	Renov. of Older Bldgs.	1970	74,895.21	63,225.70	11,669.51	-0-	-0-
7490-0090-00	Renov. of Older Bldgs.	1970	255,406.04	191,893.60	63,512.44	-0-	-0-
7490-0026-00	Impr. & Add. Power Plant	1971	300,000.00	89,894.47	73,651.55	-0-	136,453.98
7490-0029-00	Const. of Teaching Fac.	1971	863,725.00	863,580.33	143.95	-0-	.72
7490-0039-00	Replacement of Furniture	1971	250,000.00	249,701.50	283.50	15.00	-0-
7490-0040-00	Renov. of Older Bldgs.	1971	500,000.00	447,537.15	28,058.85	4.00	24,400.00
7490-0041-00	Add. Cranberry Station	1971	165,000.00	164,936.70	-0-	-0-	63.30
7490-0046-00	Land Purchase	1971	300,000.00	297,610.53	990.00	60.22	1,339.25
7490-0054-00	Roads & Sidewalks	1972	1,000,000.00	989,684.72	9,920.50	-0-	394.78
7490-0059-00	Land Purchase	1973	100,000.00	46,733.33	900.00	-0-	52,366.67
7490-0060-00	Library Books	1973	500,000.00	499,578.30	421.70	-0-	-0-
7490-0061-00	Avian Biology Bldg.	1973	105,000.00	66,087.65	9,079.60	-0-	29,832.75
7490-0110-00	Library Books	1975	2,000,000.00	-0-	730,121.53	-0-	1,269,878.47
	Total		$9,085,026.25	$6,632,738.71	$935,464.91	$340.19(a)	$1,516,482.44

(a) Reverted prior year $116.79

Schedule B-1

Federal Funds/Amherst

Statement of Receipts, Disbursements and Balances

	Balance July 1, 1970	Receipts	Disbursements	Balance June 30, 1971
Instruction				
Bankhead Jones	$ 40,041.10	$ 214,653.10	$ 79,352.19	$175,342.01
Land Grant	40,603.57	7,300.00	-0-	47,903.57
Morrill - Nelson	44,072.71	33,335.54	10,069.62	67,338.63
Smith - Hughes	(3,393.62)	1,089.41	5,522.93	(7,827.14)
Water Resources Center	11,195.52	104,990.31	93,496.20	22,689.63
Total	$132,519.28	$ 361,368.36	$ 188,440.94	$305,446.70
Extension Service				
Smith Lever Act on Amendment 1953	$ 53,555.19	$ 776,031.46	$ 739,803.13	$ 89,783.52
Research and Marketing	-0-	53,402.00	53,402.00	-0-
Agricultural Marketing #12-05-300-122	2,457.93	5,000.00	525.33	6,932.60
Agricultural Marketing #12-05-300-140	821.09	-0-	351.37	469.72
Nutrition Education Program	102,969.49	773,259.67	713,632.97	162,596.19
Total	$159,803.70	$1,607,693.13	$1,507,714.80	$259,782.03
Experiment Station				
Hatch Amended	$ 51,249.61	$ 591,733.00	$ 533,371.97	$109,610.64
McIntire - Stennis	9,207.98	67,085.00	64,369.74	11,923.24
Regional Research	15,003.73	214,850.00	218,434.12	11,419.61
CSRS-716-15-14	4,061.31	32,000.00	34,917.55	1,143.76
CSRS-12-15-67-45	-0-	27,637.00	-0-	27,637.00
Total	$ 79,522.63	$ 933,305.00	$ 851,093.38	$161,734.25
Grand Total	$371,845.61	$2,902,366.49	$2,547,249.12	$726,962.98

Schedule C-4

Statement of Endowment Fund Principal

Name of Fund	Balance July 1, 1971	Additions	Disbursements	Balance June 30, 1971
Endowments				
Alpha Sigma Phi	$ 7,100.00	$ -0-	$ -0-	$ 7,100.00
Alvord Dairy	4,197.15	-0-	-0-	4,197.15
Oscar G. Anderson Memorial	1,015.00	-0-	-0-	1,015.00
Ascension Farm	119,975.79	-0-	-0-	119,975.79
Danforth Keyes Bangs	5,861.58	-0-	-0-	5,861.58
George H. Barber	5,073.86	-0-	-0-	5,073.86
Seymour Barowsky	5,000.00	-0-	-0-	5,000.00
Joseph W. Bartlett	-0-	-0-	-0-	-0-
Oswald Behrend Award	990.80	50.41	-0-	1,041.21
Burnham Emergency	7,742.23	-0-	-0-	7,742.23
John Thomas and Nancy Butterworth	10,000.00	-0-	-0-	10,000.00
Buttrick	10,000.00	-0-	-0-	10,000.00
Theodore C. Caldwell	-0-	1,030.00	-0-	1,030.00
Harold W. Cary Prize	-0-	794.00	-0-	794.00
Lucius Clapp	8,740.42	-0-	-0-	8,740.42
Addison H. Clark Memorial	-0-	-0-	-0-	-0-
Class of 1882	1,804.35	170.52	-0-	1,974.87
George M. and Edith H. Codding	367,264.70	-0-	-0-	367,264.70
Guy Chester Crampton Research	2,539.03	-0-	-0-	2,539.03
Frederick G. Crane	25,518.08	-0-	-0-	25,518.08
John C. Cutter	1,098.41	-0-	-0-	1,098.41
Stephen Davis	19,175.00	-0-	-0-	19,175.00
Distinguished Visitors Committee	56,103.83	9,838.29	-0-	65,942.12
*Endowment from State	-0-	-0-	-0-	-0-
E. W. Eldridge, Jr. Memorial	1,555.00	-0-	-0-	1,555.00
George L. Farley	5,000.00	-0-	-0-	5,000.00
Harry L. Folsom Hoo Hoo Club	10,873.00	13.00	-0-	10,886.00
J. D. W. French	10,743.41	-0-	-0-	10,743.41
Kathryn F. Furcolo	8,782.13	355.62	-0-	9,137.75
Gassett	1,462.20	-0-	-0-	1,462.20
Charles A. Gleason	3,731.73	-0-	-0-	3,731.73
Grinnell	125.94	-0-	-0-	125.94
Margaret Ruth Pomeroy Hamlin	33,537.36	-0-	-0-	33,537.36
Clarence C. Hardy	119.65	-0-	-0-	119.65
Walter H. Harrison	11,836.14	-0-	-0-	11,836.14
Philip B. Hasbrouck	2,139.00	-0-	-0-	2,139.00
Hills	15,523.89	-0-	-0-	15,523.89
Mrs. Clifton Johnson	3,411.47	-0-	-0-	3,411.47
Helen E. Knowlton	15,000.00	-0-	-0-	15,000.00
Howard M. Lebow Memorial	5,498.15	182.19	-0-	5,680.34
Library	11,027.85	-0-	-0-	11,027.85
Murray D. and Anne M. Lincoln	11,200.00	217,604.88	-0-	228,804.88
Murray D. Lincoln	152,905.40	-0-	-0-	152,905.40
Albert P. Madeira	12,030.34	12.33	-0-	12,042.67
Mary A. Maher	-0-	6,202.85	-0-	6,202.85
Elizabeth L. McNamara	1,000.00	-0-	-0-	1,000.00
Metawampe	-0-	1,050.00	-0-	1,050.00
Porter L. Newton Educational	24,204.46	-0-	-0	24,204.46
J. Clark Osterhout	396.95	-0-	-0-	396.95
Charles A. Peters	1,162.77	-0-	-0-	1,162.77
Betsy C. Pinkerton	4,500.00	-0-	-0-	4,500.00
Charles S. Plumb	4,392.11	111.55	-0-	4,503.66
Frank H. Plumb	13,427.17	-0-	-0-	13,427.17
Robert F. Pomeroy Library	1,535.95	-0-	-0-	1,535.95
Allan Leon Pond	744.78	200.00	-0-	944.78
William Proctor	2,000.00	-0-	-0-	2,000.00
Frederick H. Read	1,699.55	-0-	-0-	1,699.55
V. A. Rice	2,784.11	-0-	-0-	2,784.11
Mary Robinson	3,000.00	-0-	-0-	3,000.00

Schedule C-4 (Continued)

Statement of Endowment Fund Principal (con't.)

Name of Fund	Balance July 1, 1971	Additions	Disbursements	Balance June 30, 1971
Ilene Sahron Saval	$ 2,559.84	$ .72	$59.84	$ 2,500.72
William R. Sessions	4,780.97	-0	-0-	4,780.97
Frank R. Shaw	-0-	933.00	-0-	933.00
Philip Sheinfield	5,800.00	18.00	-0-	5,818.00
Henry Franklin Staples Memorial	51,469.82	-0-	-0-	51,469.82
Betty Steinbugler	200.00	-0-	-0-	200.00
Stockbridge School Alumni	1,961.38	-0-	-0-	1,961.38
Ray E. Torrey Memorial	842.24	42.74	-0-	884.98
Ruth J. Totman Memorial	949.17	-0-	-0-	949.17
Frank M. West Forestry	18,328.55	-0-	-0-	18,328.55
William Wheeler	10,855.91	-0-	-0-	10,855.91
Whiting Street	2,021.70	-0-	-0-	2,021.70
Helen A. Whittier	3,338.22	-0-	-0-	3,338.22
Funds Functioning as an Endowment				
Helen Mitchell	6,850.00	6,850.00	-0-	6,850.00
Totals	$1,146,508.54	$238,610.10	$59.84	$1,385,058.80

*Principal of $142,000.00 held by State Treasurer

Schedule C-5

Endowment Income

Statement of Receipts, Disbursements and Balance

Name and Purpose of Fund	July 1, 1970	Receipts from Investments	Disbursements	Balance June 30, 1971
Income Designated for Student Aid, Scholarships and Loans:				
Alpha Sigma Phi	$ 326.19	$ 360.71	$ 300.00	$ 386.90
Alvord Dairy Scholarship	199.03	213.34	175.00	237.37
Ascension Farm School	5,544.19	6,442.03	4,700.00	7,286.22
Danforth Keyes Bangs	294.51	297.81	250.00	342.32
Seymour Borowsky	237.93	254.03	200.00	291.96
John Thomas and Nancy Butterworth	470.50	508.09	450.00	528.59
Buttrick	1,552.67	883.08	1,500.00	935.75
Lucius Clapp	397.68	444.09	350.00	491.77
Addison H. Clark Memorial	-0-	-0-	-0-	-0-
Class of 1882	78.66	91.86	170.52	-0-
George M. and Edith H. Codding	28,133.70	21,657.89	27,000.00	22,791.59
Frederick G. Crane	1,186.77	1,296.51	1,100.00	1,383.28
Stephen Davis	820.71	974.18	820.70	974.19
E. W. Eldridge, Jr. Memorial	66.81	79.19	65.00	81.00
George L. Farley	3,019.54	254.03	450.00	2,823.57
Harry L. Folsom Hoo Hoo Club	463.00	552.49	463.00	552.49
Kathryn F. Furcolo	355.62	446.28	355.62	446.28
Gassett	140.94	74.29	100.00	115.23
Charles A. Gleason	160.36	189.56	150.00	199.92
Margaret Ruth Pomeroy Hamlin	-0-	1,703.95	1,703.95	-0-
Clarence C. Hardy	65.94	6.13	-0-	72.07
Walter H. Harrison	-0-	601.31	601.31	-0-
Philip B. Hasbrouck	912.16	563.18	900.00	575.34
Mrs. Clifton Johnson	148.11	173.32	-0-	321.43
Helen E. Knowlton	1,371.46	762.25	1,500.00	633.71
Howard M. Lebow Memorial	223.94	282.36	223.94	282.36
Albert P. Madeira	512.33	611.02	512.33	611.02
Mary A. Maher	-0-	-0-	-0-	-0-
Metawampe	-0-	11.09	-0-	11.09
Porter L. Newton Educational	1,112.49	1,229.74	900.00	1,442.23
J. Clark Osterhout	94.46	20.21	74.00	40.67
Betsy C. Pinkerton	230.86	228.73	200.00	259.59
Charles S. Plumb	1,710.70	223.10	111.55	1,822.25
Frank H. Plumb	610.20	682.14	200.00	1,092.34
V. A. Rice	157.76	141.49	150.00	149.25
Mary Robinson	150.82	152.46	150.00	153.28
Ilene Sharon Saval	30.88	189.40	90.72	129.56
Philip Sheinfield	393.02	295.27	350.00	338.29
Dr. Henry Franklin Staples Memorial	-0-	2,615.04	2,615.04	-0-
Stockbridge School Alumni	478.28	99.62	-0-	577.90
Ruth J. Totman Memorial	176.29	48.36	-0-	224.65
Frank M. West Forestry	806.54	931.24	800.00	937.78
Whiting Street	95.00	102.85	95.00	102.85
Helen A. Whittier	190.92	169.63	125.00	235.55
Sub-Total	$52,920.97	$46,863.35	$49,902.68	$49,881.64

Schedule C-5 (Continued)

Endowment Income

Statement of Receipts, Disbursements and Balances

	Balance July 1, 1970	Receipts from Investments	Disbursements	Balance June 30, 1971
Prizes:				
Harold W. Cary	$ -0-	$ 8.46	$ -0-	$ 8.46
Grinnel	134.52	6.53	-0-	141.05
Elizabeth L. McNamara	-0-	100.82	100.82	-0-
Allan Leon Pond	122.56	37.99	15.35	145.20
Betty Steinbugler	79.54	10.11	20.00	69.65
Sub-Total	$ 336.62	$ 163.91	$ 136.17	$ 364.36
Books:				
Oscar G. Anderson Memorial	$ 461.21	$ 51.66	$ -0-	$ 512.87
John C. Cutter	468.33	55.91	32.28	491.96
Library	887.14	560.26	887.13	560.27
Robert F. Pomeroy Library	530.84	78.17	180.70	428.31
Frank R. Shaw	-0-	9.22	-0-	9.22
Sub-Total	$ 2,347.52	$ 755.22	$ 1,100.11	$ 2,002.63
Miscellaneous Purposes:				
George H. Barber	$ 1,277.03	$ 257.92	$ -0-	$ 1,534.95
Oswald Behrend Award	-0-	50.41	50.41	-0-
Theodore C. Caldwell	-0-	25.26	-0-	25.26
Guy Chester Crampton Research	1,166.87	129.10	-0-	1,295.97
Distinguished Visitors Committee	8,720.62	3,007.74	-0-	11,728.36
J. D. W. French	2,685.99	830.12	495.00	3,021.11
Hills	2,147.17	788.70	403.86	2,532.01
Murray D. and Anne M. Lincoln	336.65	886.51	-0-	1,223.16
Murray D. Lincoln Land	288.56	-0-	-0-	288.56
Charles A. Peters	683.90	59.08	-0-	742.98
William Proctor	1,595.03	101.56	-0-	1,696.59
Ray E. Torrey Memorial	-0-	42.74	42.74	-0-
Sub-Total	$18,901.82	$ 6,179.14	$ 992.01	$24,088.95
General Purpose (Unrestricted):				
Joseph W. Bartlett	$ -0-	$ -0-	$ -0-	$ -0-
Burnham Emergency	1,464.13	393.47	1,500.00	357.60
Frederick H. Read	315.65	86.35	325.00	77.00
William R. Sessions	896.71	242.91	950.00	189.62
William Wheeler	2,048.02	551.68	2,212.47	387.23
Sub-Total	$ 4,724.51	$ 1,274.41	$ 4,987.47	$ 1,011.45
Undistributed Income	$12,826.47	$ 63,955.86	$ 67,707.17	$ 9,075.16
Endowment from State	4,763.13	5,078.91	1,922.04	7,920.00
Funds Functioning as an Endowment				
Helen Mitchell	139.95	347.93	-0-	487.88
Total	$96,960.99	$124,618.73	$126,747.65	$94,832.07

Schedule D-1

Statement of Student Loan Funds

Trust Accounts	Balance July 1, 1970	Additions & Interest	Loan Transactions Repaid	Loaned	Cancelled	Balance, June 30, 1971 Notes	Cash	Total
Danforth Keyes Bangs	$ 7,263.60	$ 136.96	$ 1,421.86	$ -0-	$ -0-	$ 1,274.41	$ 6,126.15	$ 7,400.56
Addison H. Clark Memorial	19,969.36	-0-	-0-	-0-	-0-	-0-	19,969.36	19,969.36
Class of 1905	3,559.23	-0-	-0-	-0-	-0-	354.89	3,204.34	3,559.23
Class of 1969	1,000.00	-0-	-0-	-0-	-0-	1,000.00	-0-	1,000.00
John Geiger	-0-	1,140.00	-0-	1,140.00	-0-	1,140.00	-0-	1,140.00
Vincent Goldthwait	17,665.58	118.05	14,855.05	19,653.00	114.00	11,622.37	6,047.26	17,669.63
Graduate and Foreign Loan	5,000.00	2,000.00	12,314.00	15,144.00	-0-	4,955.00	2,045.00	7,000.00
Walter H. Harrison	7,829.23	601.31	-0-	-0-	-0-	-0-	8,430.54	8,430.54
Murray D. Lincoln	363.38	-0-	-0-	-0-	-0-	-0-	363.38	363.38
Massachusetts Agriculture	622.52	-0-	-0-	622.52	-0-	622.52	-0-	622.52
Massachusetts Assembly	18,080.42	(6,742.54)	6,769.29	-0-	-0-	11,120.06	217.82	11,337.88
Elizabeth L. McNamara	461.87	32.12	-0-	-0-	-0-	-0-	493.99	493.99
New England Feedmen's Association	757.39	-0-	-0-	-0-	-0-	-0-	757.39	757.39
Sievers Memorial	2,317.24	93.61	550.00	200.00	-0-	455.57	1,955.28	2,410.85
Henry F. Staples Memorial	24,982.98	356.59	40,468.67	44,640.50	-0-	16,423.96	8,915.61	25,339.57
Sub Total	$ 109,872.80	$ (2,263.90)	$ 76,378.87	$ 81,400.02	$ 114.00	$ 48,968.78	$ 58,526.12	$ 106,594.90
New England Society of New York	996.00	-0-	5.00	5.00	-0-	-0-	996.00	996.00
Total Trust Funds	$ 110,868.80	$ (2,263.90)	$ 76,383.87	$ 81,405.02	$ 114.00	$ 48,968.78	$ 59,522.12	$ 108,490.90
Federal Funds								
National Defense Student Loans	$2,915,474.70	$500,599.73	$139,667.52	$641,267.61	$31,909.57	$3,345,542.17	$ 38,622.69	$3,384,164.86
Student Nursing Loans	78,475.82	38,672.25	4,788.19	22,815.00	1,264.00	101,361.77	14,522.30	115,884.07
Health Professions Student Loans	-0-	5,614.33	-0-	2,406.00	-0-	2,406.00	3,208.33	$ 5,614.33
Total Federal Funds	$2,993,950.52	$544,886.31	$144,455.71	$666,488.61	$33,173.57	$3,449,309.94	$ 56,353.32	$3,505,663.26
Grand Total	$3,104,819.32	$542,622.41	$190,839.58	$747,893.63	$33,287.57	$3,498,278.72	$115,875.44	$3,614,154.16

Schedule E-1

U of M Trustees for

University of Massachusetts Building Authority

Statement of Receipts, Disbursements, Transfers and Balances

Description	Balance July 1, 1970	Transfers In	Receipts	Transfers Out	Disbursements	Balance June 30, 1971
First Project						
Brett & Gorman Dorms						
Revenue Account	$ -0-	$ -0-	$1,306,487.61	$ 112,809.79	$1,193,677.82	$ -0-
Maintenance and Operating Account	568.15	112,809.79	-0-	-0-	100,529.66	12,848.28
Unpaid Check Fund	30.00	-0-	-0-	-0-	-0-	30.00
Total	$ 598.15	$ 112,809.79	$1,306,487.61	$ 112,809.79	$1,294,207.48	$ 12,878.28
Second Project						
Dickinson, Field, Grayson and Webster Dorms						
Revenue Account	$ -0-	$ 32,225.00	$ 827,356.64	$ 378,240.11	$ 481,341.53	$ -0-
Maintenance and Operating Account	70,596.55	378,240.11	470.57	32,225.00	322,386.00	94,696.23
Unpaid Check Fund	30.00	-0-	-0-	-0-	-0-	30.00
Total	$ 70,626.55	$ 410,465.11	$ 827,827.21	$ 410,465.11	$ 803,727.53	$ 94,726.23
Third Project						
Franklin Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 133,735.21	$ -0-	$ 133,735.21	$ -0-
Total	$ -0-	$ -0-	$ 133,735.21	$ -0-	$ 133,735.21	$ -0-
Fourth Project						
Emerson, James, Melville Thoreau, Kennedy & Coolidge Dorms and Alumni Stadium						
Revenue Account	$ -0-	$ 13,760.12	$1,406,728.82	$ 585,222.37	$ 835,266.59	$ -0-
Maintenance and Operating Account	31,639.17	585,222.37	49.68	13,760.12	429,253.54	173,897.54
Unpaid Check Fund	30.00	-0-	175.00	-0-	-0-	205.00
Total	$ 31,669.17	$ 598,982.49	$1,406,953.50	$ 598,982.49	$1,264,520.13	$174,102.54
Fifth Project						
Hampshire Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 162,428.18	$ -0-	$ 162,428.18	$ -0-
Total	$ -0-	$ -0-	$ 162,428.18	$ -0-	$ 162,428.18	$ -0-

Schedule E-1 (Continued)

U of M Trustees for

University of Massachusetts Building Authority

Statement of Receipts, Disbursements, Transfers and Balances

Description	Balance July 1, 1970	Transfers In	Receipts	Transfers Out	Disbursements	Balance June 30, 1971
Sixth Project						
J. Q. Adams, J. Adams and Washington Dorms						
Revenue Account	$ -0-	$ -0-	$1,077,972.07	$ 384,633.13	$ 693,338.94	$ -0-
Maintenance and Operating Account	2,086.58	384,633.13	165.02	-0-	360,953.43	25,931.30
Total	$ 2,086.58	$ 384,633.13	$1,078,137.09	$ 384,633.13	$1,054,292.37	$ 25,931.30
Seventh Project						
Hampton Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 164,777.91	$ -0-	$ 164,777.91	$ -0-
Total	$ -0-	$ -0-	$ 164,777.91	$ -0-	$ 164,777.91	$ -0-
Eighth Project						
Crampton, Mackimmie, Patterson and Prince						
Revenue Account	$ -0-	$ -0-	$ 731,426.56	$ 246,992.33	$ 484,434.23	$ -0-
Maintenance and Operating Account	4,533.11	246,992.33	40,929.98	-0-	265,644.10	26,811.32
Total	$ 4,533.11	$ 246,992.33	$ 772,356.54	$ 246,992.33	$ 750,078.33	$ 26,811.32
Ninth Project						
Berkshire Dining Commons						
Revenue Account	$ -0-	$ -0-	$ 167,159.85	$ -0-	$ 167,159.85	$ -0-
Total	$ -0-	$ -0-	$ 167,159.85	$ -0-	$ 167,159.85	$ -0-
Tenth Project						
Cance, Pierpont and Moore						
Revenue Account	$ -0-	$ -0-	$ 590,593.00	$ 167,168.37	$ 423,424.63	$ -0-
Maintenance and Operating Account	36,290.15	167,168.37	3,859.02	-0-	183,519.32	23,798.22
Total	$ 36,290.15	$ 167,168.37	$ 594,452.02	$ 167,168.37	$ 606,943.95	$ 23,798.22

Schedule E-1 (Continued)

U of M Trustees for

University of Massachusetts Building Authority

Statement of Receipts, Disbursements, Transfers and Balances

Description	Balance July 1, 1970	Transfers In	Receipts	Transfers Out	Disbursements	Balance June 30, 1971
Eleventh Project						
Lincoln, Campus Center and Parking Garage Revenue Account	$ -0-	$ -0-	$1,420,528.11	$ -0-	$1,090,654.53	$329,873.58
Total	$ -0-	$ -0-	$1,420,528.11	$ -0-	$1,090,654.53	$329,873.58
Twelth Project						
Brown, Cashin and McNamara Dorms Revenue Account	$ -0-	$ -0-	$ 139,896.95	$ 69,038.95	$ 70,858.00	$ -0-
Maintenance and Operating Account	-0-	69,038.95	-0-	-0-	30,952.32	38,086.63
Total	$ -0-	$ 69,038.95	$ 139,896.95	$ 69,038.95	$ 101,810.32	$ 38,086.63
Thirteenth Project						
North Village Student Apartments Revenue Account	$ -0-	$ -0-	$ 70,649.46	$ 70,649.46	$ -0-	$ -0-
Maintenance and Operating Account	-0-	70,649.46	-0-	-0-	10,926.42	59,723.04
Total	$ -0-	$ 70,649.46	$ 70,649.46	$ 70,649.46	$ 10,926.42	$ 59,723.04
GRAND TOTALS	$145,803.71	$2,060,739.63	$8,245,389.64	$2,060,739.63	$7,605,262.21	$785,931.14

For details see Schedules F-3 through F-22

Schedule F-2

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 03 FEDERAL FELLOWSHIP

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
03/01 NATIONAL INSTITUTE OF HEALTH							
INSTITUTIONAL ALLOWANCE	A 007700	196.52	.00	196.52CR	.00	.00	S11
GM-42799-01	A 009426	.00	.00	830.70	830.70	.00	J39
GM-42610-01	A 009427	.00	.00	.00	.00	.00	J32
GM-42665-01	A 009428	.00	.00	202.80	202.80	.00	J32
MH-39681-02	A 009429	.00	.00	458.82	458.82	.00	J21
EH-70-654-C	A 009430	.00	.00	2,674.76	2,674.76	.00	WW1
EH-70-655-B	A 009431	.00	.00	610.35	610.35	.00	M13
MH-44131-01	A 009432	.00	.00	547.02	547.02	.00	J21
GM-36120-03	A 009433	.00	.00	214.99	214.99	.00	J32
GM-37986-03	A 009434	.00	.00	.00	.00	.00	J39
AI-33410-02	A 009435	.00	.00	2.24	2.24	.00	J39
HD-36162-03-A1	A 009436	.00	.00	383.41	383.41	.00	J39
AI-40034-02	A 009437	.00	.00	217.11	217.11	.00	J39
AP-42356-01	A 009438	.00	.00	1,592.29	1,592.29	.00	M14
NIH AH 00654-04	A 009439	.00	.00	18,290.07	18,290.07	.00	WW1
NIH AH 00655-03	A 009440	.00	.00	12,721.53	12,721.53	.00	M13
NIH GM 42610-02	A 009441	.00	.00	2,400.00	2,400.00	.00	J32
GM 42655-02	A 009442	.00	98.84	345.94	444.78	.00	J32
NIH AP 48527-01	A 009443	.00	.00	3,361.48	3,361.48	.00	M12
MH 44131-02/AMHERST	A 009444	.00	.00	2,305.80	2,305.80	.00	J21
AP 42356-03	A 009445	.00	.00	2,621.02	2,621.02	.00	M14
GM 46669-01	A 009447	.00	.00	.00	.00	.00	J32
03/01 NATIONAL INSTITUTE OF HEALTH	TOTALS	196.52	98.84	49,583.81	49,879.17	.00	
03/02 DEPARTMENT OF INTERIOR							
WP-26229-02	A 009701	.00	.00	.00	.00	.00	J36
WP-26346-01	A 009703	.00	.00	.00	.00	.00	M13
WP-26454-01	A 009704	812.02	.00	.00	811.71	.31	M13
WP-26453-01	A 009705	709.88	.00	.00	709.56	.32	M13
DI WP 26454-02 / AMHERST	A 009706	.00	7,300.00	2,500.00CR	3,968.90	831.10	M13
DI-WP-26561-01 / AMHERST	A 009707	.00	5,300.00	2,500.00CR	2,296.00	504.00	M12
DIWP 26-376-01 AMHERST	A 009708	.00	750.00	.00	675.00	75.00	M13
03/02 DEPARTMENT OF INTERIOR	TOTALS	1,521.90	13,350.00	5,000.00CR	8,461.17	1,410.73	
03/03 NSF FOUNDATION							
INSTITUTIONAL ALLOWANCE	A 009000	27,261.07	3,125.00	27,261.07CR	3,125.00	.00	S11
SUMMER AND ACADEMIC YEAR	A 009100	738.04CR	738.30	.26CR	.00	.00	S11

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 03 FEDERAL FELLOWSHIP CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
03/03 NSF FOUNDATION	CONTINUED						
FACULTY EDUCATION ALLOWANCE	A 009200	.00	.00	.00	.00	.00	S11
NSF SENIOR FOREIGN SCIENTIST	A 009202	.00	17,045.90	149.92CR	6,378.11	10,517.87	S11
03/03 NSF FOUNDATION	TOTALS	26,523.03	20,909.20	27,411.25CR	9,503.11	10,517.87	
03/04 NATIONAL DEFENSE GRADUATE FELLOWSHIPS	A 011100	.00	150.00	205,894.64	206,044.64	.00	S11
03/04 NATIONAL DEFENSE GRADUATE	TOTALS	.00	150.00	205,894.64	206,044.64	.00	
03/05 OFFICE OF EDUCATION							
HEW FELLOWSHIP--CARTER/AMHERST	A 009510	.00	9,920.80	.00	9,920.53	.27	Q11
OEG-0-8-003093-3093	A 068209	1,799.03	.00	.00	1,799.03	.00	J25
OEG-0-9-311104-3112 031A	A 068211	1,397.48	.00	.00	1,397.48	.00	J25
OEG 0-70-3029	A 068219	.00	15,900.00	7,500.00CR	6,561.90	1,838.10	J25
03/05 OFFICE OF EDUCATION	TOTALS	3,196.51	25,820.80	7,500.00CR	19,678.94	1,838.37	
SECT-03 FEDERAL FELLOWSHIP		31,437.96	60,328.84	215,567.20	293,567.03	13,766.97	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 04 MISCELLANEOUS FELLOWSHIPS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
ABELARD FOUNDATION	A 009800	.00	10,000.00	.00	10,000.00	.00	Q11
AMC FELLOWSHIP FUND	A 009895	10,611.90	.00	.00	9,592.31	1,019.59	K71
AMERICA THE BEAUTIFUL FELLOWSHIP	A 009901	.00	.00	.00	.00	.00	K12
AMERICAN CHEMICAL SOCIETY PRF	A 009903	10.12CR	.00	10.12	.00	.00	J34
AMERICAN CHEMICAL SOCIETY PRF	A 009904	87.66	.00	.00	67.69	19.97	J34
HAZEL STILLWELL BEST	A 009905	2,764.40	.00	.00	2,699.95	64.45	M15
AMERICAN SOCIETY FOR ENGINEERING ED	A 009906	1,081.52	.00	.00	1,081.52	.00	M13
ELECTROCHEMICAL SOCIETY	A 009980	.00	1,000.00	.00	375.00	625.00	J34
CAMPBELL INSTITUTE FOR FOOD	A 010002	1,000.00	.00	.00	179.07	820.93	K10
FORD FOUNDATION-ALLEN	A 010003	679.35	.00	.00	679.35	.00	L11
FORD FOUNDATION-SONNENSCHEIN	A 010201	.00	17,050.00	161.87CR	16,887.85	.28	J12
GENERAL TELEPHONE AND ELECTRONICS	A 010300	28.56	.00	28.56CR	.00	.00	M12
GLASS CONTAINER	A 010302	12,312.80	17,617.55	.00	16,333.56	13,596.79	K10
INSTITUTE TRAFFIC ENGINEERS/AMHERST	A 010920	.00	3,000.00	.00	2,458.86	541.14	M13
MICROBIOLOGY PRE-DOCTORAL FELLOWSHIP	A 011000	85.37	.00	.00	.00	85.37	J32
MISUBISHI FELLOWSHIP	A 011050	73.08	.00	.00	.00	73.08	S17
NATIONAL ASSN OF INDEPENDENT SCHOOLS	A 011080	1,078.43	13,500.00	.00	14,577.30	1.13	Q11
NORTHEAST UTILITIES FELLOWSHIP AWARD	A 011503	1,639.22	.00	.00	346.14	1,293.08	M13
OWENS ILLINOIS FELLOWSHIP	A 011505	2,400.24	.00	.00	.00	2,400.24	S17
PAINT RESEARCH INSTITUTE	A 011600	8,188.99	4,500.00	.00	1,361.45	11,327.54	S17
POLYMER SCIENCE AND ENGINEERING	A 011605	29,010.35	17,165.00	.00	32,723.74	13,451.61	S17
SCHOOL OF EDUCATION FELLOWSHIP	A 011660	.10	10,117.00	.00	8,254.85	1,862.25	Q11
TEXACO FELLOWSHIP IN CHEMISTRY	A 011700	5,265.93	.00	.00	2,638.67	2,627.26	J34
WISE POTATO CHIP	A 011800	159.41	.00	.00	145.24	14.17	K10
WOODROW WILSON NATIONAL FELLOWSHIP	A 011900	228.30	.00	.00	.00	228.30	J38
YOUNG ISRAEL FELLOWSHIP FUND AMHERST	A 011950	.00	3,490.00	.00	3,476.50	13.50	K12
SECT-04 MISCELLANEOUS FELLOWSHIPS		76,685.49	97,439.55	180.31CR	123,879.05	50,065.68	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 05 SCHOLARSHIPS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
AFGRAD/AMHERST	A 012650	.00	9,078.00	.00	9,078.00	.00	F21
AMERICAN AGRICULTURIST	A 012660	200.00	200.00	.00	200.00	200.00	K01
AMERICAN SOCIETY ENGINEER	A 012700	600.00	200.00	.00	600.00	200.00	M14
ANONYMOUS SCHOLARSHIP 2	A 013000	3,181.22	236.00	.00	2,706.22	711.00	F24
BAND SCHOLARSHIP FUND	A 013300	698.45	121.00	.00	200.00	619.45	J19
GEORGE H BARBER SCHOLARSHIP	A 013500	6,125.59	147,868.42	52,660.43	206,654.44	.00	P11
MARGARET FITZ BARNES AMHERST	A 013700	.00	185.00	.00	75.00	110.00	F24
DON ALLAN MEMORIAL SCHOLARSHIP FUND	A 013800	500.00	.00	.00	500.00	.00	K01
BORDEN AGRICULTURAL SCHOLARSHIP	A 013900	300.00	.00	.00	300.00	.00	K03
NATHANIEL BOWDITCH	A 014300	355.00	.00	.00	.00	355.00	K03
CMAA SCHOLARSHIP	A 014800	300.00	.00	.00	.00	300.00	K03
CLASS OF 1913 SCHOLARSHIP AMHERST	A 014900	.00	100.00	.00	100.00	.00	F24
CLASS OF 1919 SCHOLARSHIP AMHERST	A 015100	.00	100.00	.00	100.00	.00	F24
CLASS OF 1920 SCHOLARSHIP	A 015200	.00	300.00	.00	200.00	100.00	F24
COMBUSTION ENGINEERING	A 015300	555.00	.00	.00	555.00	.00	M12
CHARLES M COX	A 015500	150.00	.00	.00	150.00	.00	F24
LOTTA CRABTREE SCHOLARSHIP	A 015700	367.00	.00	.00	367.00	.00	F24
CLASS OF 1926 AMHERST	A 015800	.00	100.00	.00	.00	100.00	F24
RACHEL DEITZ SCHOLARSHIP	A 016000	300.00	.00	.00	.00	300.00	F24
ENGINEERING ALUMNI SCHOLARSHIP	A 016300	3,104.84	3,226.58	.00	3,438.98	2,892.44	M12
FLORISTS GARDNERS CLUB	A 016900	100.00	125.00	.00	50.00	175.00	K03
FOREIGN STUDY SCHOLARSHIP	A 016950	.00	.00	2,000.00	.00	2,000.00	E16
ELIZABETH G FITZGERALD SCHOLARSHIP	A 017000	125.00	1,500.00	125.00CR	625.00	875.00	F24
GENERAL FOODS SCHOLARSHIP/AMHERST	A 017100	.00	2,000.00	.00	1,600.00	400.00	F24
FOREIGN STUDY PROGRAM 1971	A 017200	.00	.00	.00	.00	.00	E20
FRENCH GOVERNMENT FUND	A 017300	254.00	.00	.00	.00	254.00	J23
JOEL GOLDTHWAIT AMHERST	A 017600	.00	700.00	.00	500.00	200.00	F24
GRADUATE SCHOOL SCHOLARSHIP AND LOAN	A 018300	243.66	.00	.00	243.66	.00	S11
HAMPDEN COUNTY ROD AND GUN	A 018325	.00	300.00	.00	200.00	100.00	F24
HEALTH PROFESSIONS SCHOLARSHIP	A 018350	.00	2,022.00	.00	1,320.00	702.00	F24
HOOD SCHOLARSHIP	A 018500	1,042.00	1,200.00	.00	1,100.00	1,142.00	K03
INDUSTRIAL ENGINEERING SCHOLARSHIP	A 018700	135.44	.00	.00	.00	135.44	M16
HOWARD JOHNSON SCHOLARSHIP	A 018900	.00	1,500.00	.00	1,500.00	.00	K17
H F JONES SCHOLARSHIP AMHERST	A 019100	.00	350.00	.00	350.00	.00	F24
IREX/AMHERST	A 019200	.00	5,410.00	.00	4,410.00	1,000.00	F21
KNORR SWISS INSTITUTE PRODUCTS	A 019400	400.00	.00	.00	.00	400.00	N13
LASPAU/AMHERST	A 019500	.00	6,145.00	.00	5,087.00	1,058.00	F21
MASS MERCHANDISING SCHOL	A 019800	.00	.00	1,000.00	1,000.00	.00	L11
MERWIN MEMORIAL SCHOLARSHIP	A 020200	1,976.55	2,524.80	.00	2,000.00	2,501.35	F24
MISCELLANEOUS SCHOLARSHIPS	A 020300	3,053.61	885.00	125.00	3,067.49	996.12	F24
NATIONAL FOOD BROKERS	A 020400	1,000.00	1,000.00	.00	2,000.00	.00	K10

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 05 SCHOLARSHIPS CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
CONTINUED							
NEW ENGLAND FARM & GARDEN SCHL/AMH	A 020450	.00	1,000.00	.00	1,000.00	.00	K01
NEW YORK FARMER'S SCHOLARSHIP	A 020500	.00	2,000.00	.00	2,000.00	.00	K01
NON PROF EMPLOYEES OUTING	A 020505	15.02	185.51	.00	.00	200.53	B12
NURSING SCHOLARSHIP FUND	A 020590	28,157.00	18,475.00	.00	45,832.00	800.00	O11
CHARLES POWELL SCHOLARSHIP AMHERST	A 020900	.00	400.00	.00	.00	400.00	F24
PROGRAM ABLE POLAROID SCHOLARSHIP	A 021000	4,188.67	28,919.48	50,000.00	69,790.98	13,317.17	L11
RALSTON PURINA	A 021300	.00	500.00	.00	500.00	.00	K15
RESTAURANT AND HOTEL SCHOLARSHIP	A 021400	755.00	7,199.00	.00	7,200.00	754.00	K17
RESTAURANT AND HOTEL	A 021401	100.00	.00	.00	100.00	.00	K17
JOSEPH C RICH FUND	A 021500	150.00	100.00	.00	.00	250.00	K24
SEARS ROEBUCK COMPANY	A 021700	.00	800.00	.00	800.00	.00	L11
ALFRED P SLOAN SCHOLARSHIP	A 021850	579.96	.00	.00	579.78	.18	S17
STERLING SURREY SCHOLARSHIP	A 022100	920.00	.00	.00	.00	920.00	L11
STOCKBRIDGE SENATE SCHOLARSHIP	A 022200	235.88	.00	.00	235.88	.00	K01
STOUFFER RESTAURANT CORP	A 022300	1,250.00	.00	.00	250.00	1,000.00	K17
THERRIEN SCHOLARSHIP	A 022400	1,000.00	.00	.00	1,000.00	.00	K03
TRAFFIC FINES SCHOLARSHIP	A 022500	50,189.70	60,566.45	36,000.00CR	63,240.00	11,516.15	AB1
UNIVERSITY SCHOLARSHIP / AMHERST	A 023100	13,583.99	21.00	.00	.00	13,604.99	F24
I R WILSON	A 023300	19.25	.00	.00	.00	19.25	F24
WORCESTER COUNTY POULTRY ASSN	A 023500	195.31	100.00	.00	295.30	.01	K01
SCHOOL OF NURSING SCHOLARSHIP	A 034200	700.00	.00	159.85CR	.00	540.15	O11
SECT-05 SCHOLARSHIPS		127,107.14	307,643.24	69,500.58	443,101.73	61,149.23	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 06 AUXILIARY ENTERPRISES

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
ATHLETIC RESERVE FUND	A 025300	33,397.33	94.91	2,660.43CR	.00	30,831.81	P14
ATHLETIC RESERVE FUND SPECIAL	A 025302	257,087.01	16,137.86	.00	45,015.40	228,209.47	P14
ATHLETIC TRUST FUND	A 025500	12,014.40	593,064.05	76,583.14CR	506,385.02	22,110.29	P14
BOARDING HALL TRUST	A 025900	73,700.72	183.08	5,808,434.03	5,882,134.44	183.39	Y11
CONTINUING EDUCATION	A 028310	.00	31,989.59	883,071.66	750,774.01	164,287.24	U12
NORTH VILLAGE DAMAGE DEPOSIT	A 033980	.00	.00	.00	.00	.00	B11
ORCHARD HILL RESIDENTIAL COLLEGE	A 034202	2,224.63	4,757.86	400.00	5,104.95	2,277.54	DD1
RECREATIONAL ACTIVITY FEE	A 035200	3,177.00	5,412.00	6,300.00CR	1,180.85	1,108.15	P15
RESIDENCE HALL TRUST FUND	A 035602	120,776.06	1,706,549.20	82,619.79CR	1,514,774.76	229,930.71	F29
RESIDENCE HALL TELEPHONE TRUST FUND	A 035603	38,856.77	242,842.70	.00	226,832.44	54,867.03	F29
R H T LINCOLN APARTMENTS	A 035605	.00	25,032.51	44,663.62	11,437.29	58,258.84	B11
R H T UNIVERSITY APARTMENTS	A 035607	.00	15,925.84	25,814.93	6,278.77	35,462.00	B11
RESIDENT HALL REFURBISHING	A 035608	.00	.00	.00	.00	.00	B11
SOUTHWEST RESIDENTIAL COLLEGE	A 037703	917.38	.00	.00	708.49	208.89	DD5
STUDENT AUTOMATIC SERVICE FUND	A 038300	77,856.14	104,731.62	78,654.76CR	27,656.21	76,276.79	Z17
STUDENT HEALTH SERVICE AMHERST	A 038500	15.39	1,424,500.74	.00	1,291,816.98	132,699.15	V11
STUDENT HEALTH SERVICE	A 038600	26,000.00	.00	.00	.00	26,000.00	V11
STUDENT HEALTH FUND	A 038602	18,700.00	.00	.00	.00	18,700.00	V11
STUDENT HOUSING DEPOSIT	A 038630	463,600.00	779,250.00	922,100.00CR	273,700.00	47,050.00	F29
CAMPUS CENTER FOOD SERVICE	A 038700	20,179.81	57,283.51	1,187,082.52	1,264,542.15	3.69	Z12
CAMPUS CENTER BUILDING AMORTIZATION	A 038800	824,609.78	587,980.90	720,865.68CR	691,725.00	.00	Z11
STUDENT UNION MAINT. AND OPERATING	A 038900	33,672.92CR	79,166.05	1,123,254.29	1,168,177.08	570.34	Z11
CAMPUS CENTER PETTY CASH	A 039000	22,700.00	.00	21,250.00	.00	43,950.00	Z11
CAMPUS CENTER UNIVERSITY STORE	A 039500	93,498.69	428,352.15	2,322,404.57	2,844,250.15	5.26	Z13
SUMMER COUNSELING TRUST FUND	A 039600	71,809.13	155,165.83	6,690.91CR	96,836.53	123,447.52	F26
SECT-06 AUXILIARY ENTERPRISES		2,127,447.32	6,258,420.40	9,519,900.91	16,609,330.52	1,296,438.11	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 07 CLEARING ACCOUNT

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
ASSOCIATE ALUMNI CLEARING ACCOUNT	A 025000	440.00	6,685.00	2,490.00CR	100.00	4,535.00	AA5
ATHLETIC CLEARING ACCOUNT	A 025200	.00	.00	80,000.00	80,000.00	.00	P14
ATHLETIC REVOLVING ACCOUNT	A 025400	.00	15,000.00	.00	15,000.00	.00	P14
BOARDING HALL CLEARING	A 025700	.00	5,816,589.08	5,188,487.93CR	628,101.15	.00	Y11
CAMPUS STUDENT DAMAGE	A 026450	.00	.00	.00	.00	.00	F29
DORMITORY PERSONNEL ACCOUNT	A 028390	.00	632,302.39	23,510.51CR	580,978.27	27,813.61	F29
DVD-X-CLEARING ACCOUNT	A 028450	.00	188,635.20	350,410.30	539,045.50	.00	E20
DOMESTIC ACTIONS-CLEARING	A 028750	.00	.00	.00	.00	.00	Q11
GENERAL FEDERAL GRANT	A 030701	50,000.00CR	8,977,268.50	.00	9,086,809.60	159,541.10CR	B11
MARRIED STUDENT HOUSING	A 032800	.00	.00	.00	.00	.00	B11
MASS ASSEMBLY LOAN PAYMENT FUND	A 032900	3,095.75	6,742.54	.00	9,838.29	.00	B11
NEW YORK LIFE ESCROW	A 033950	.00	1,275.00	41,620.00	3,253.70	39,641.30	B11
REIMBURSABLE GRANTS TRUST FUND	A 035404	84,361.96CR	.00	254,921.12CR	.00	339,283.08CR	B11
CAMPUS CENTER CLEARING ACCOUNT	A 039200	.00	4,684,286.38	4,683,259.15CR	1,027.23	.00	Z11
TRAVEL ADVANCE REVOLVING CONTRA	A 040300	10,000.00	.00	.00	.00	10,000.00	B11
UNPAID TRUST FUND CHECKS	A 040902	2,498.42	7,215.94	.00	1,618.20	8,096.16	B11
NIH CASH	A 070000	7,128.97	3,780,000.00	3,305,690.06CR	481,431.00	7.91	B11
NIH CASH OFFICE OF EDUCATION	A 070001	5,242.82	305,000.00	310,242.82CR	.00	.00	B11
NSF CASH RECEIPT	A 083300	.00	1,512,800.00	1,612,848.11CR	.00	100,048.11CR	B11
SECT-07 CLEARING ACCOUNT		105,956.00CR	25,933,800.03	14,909,419.40CR	11,427,202.94	508,778.31CR	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 08 GENERAL PURPOSE FUND

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
08/01 UNRESTRICTED CURRENT FUNDS							
ADMINISTRATIVE ALLOWANCE PROGRAM	A 024000	25,271.60	17,578.13	44,375.96	53,254.76	33,970.93	B11
ADVANCEMENT OF ASTRONOMY	A 024102	2,727.50	2,500.00	.00	1,675.02	3,552.48	J39
GEORGE W ALDERMAN MUSEUM FUND	A 024300	382.76	.00	.00	.00	382.76	J39
NICHOLAS APPERT CHAIR	A 024700	7,309.90	12,500.00	.00	10,114.98	9,694.92	K65
ART ACQUISITION FUND	A 024900	313.45	.00	.00	.00	313.45	J26
BLACK REPERTORY THEATRE AMHERST	A 025650	.00	1,916.51	.00	1,658.77	257.74	J50
CHANCELLORS SPECIAL TRUST FUND	A 025890	.00	.00	147,275.84	.00	147,275.84	AB1
JAMES BUTLER PLAQUE	A 026060	106.25	.00	.00	106.25	.00	AB1
CAMPUS STUDY FUND	A 026400	.00	.00	.00	.00	.00	Z11
COLLEGIATE ED DISADVANTAGE STUDENTS	A 026600	1,080.31	1,100.00	1,030.31CR	1,150.00	.00	F20
CENTER FOR APPLIED RESEARCH MALAWI	A 026702	8,185.41	.00	.00	63.17	8,122.24	K57
COMPUTER SCIENCE SERVICE FUND	A 028270	.00	.00	500.00	499.93	.07	S12
LAWRENCE S DICKENSON MEMORIAL	A 028700	100.00	.00	.00	.00	100.00	AB1
EQUINE RESEARCH TRUST FUND	A 028910	1,049.37	750.00	.00	1,302.04	497.33	K38
EQUITATION FUND	A 029001	785.48	436.00	.00	926.55	294.93	K38
FINE ARTS DISCRETIONARY	A 029090	.00	14.62	.00	.00	14.62	E19
FLOWER GROWER FUND	A 029300	51.13	.00	51.13CR	.00	.00	K01
FORD FOUNDATION ALAMPUR-DRIVER	A 029600	2,629.99	500.00	1.25CR	2,775.80	352.94	J24
GENERAL ELECTRIC PITTSFIELD	A 030700	2,294.92	8,750.92	8,000.00	18,790.26	255.58	L11
GENERAL SERVICE TRUST FUND	A 031000	264,797.37	970,483.01	261.68	1,166,443.21	69,098.85	X00
CHEMICAL TRUST FUND	A 031001	.00	.00	.00	.00	.00	X00
GIFT OF STOCKBRIDGE CLASS OF 1965	A 031300	515.87	.00	.00	14.39	501.48	K71
GRADUATE STUDENT PROGRAM FUND	A 031305	13,317.64	17,232.50	564.88CR	8,250.97	21,734.29	S11
HENDERSON FUND	A 031401	6,954.00	.00	.00	.00	6,954.00	K17
HEALTH INSURANCE RESERVE FUND	A 031404	4,181.25	.00	.00	.00	4,181.25	B12
HONORS PROGRAM TRUST	A 032000	129.31	.00	1,000.00	1,034.25	95.06	J14
HORTICULTURE RESEARCH CENTER FUND	A 032100	22,975.20	12,728.90	16.81	10,560.48	25,160.43	K64
MAZ KADE PROFESSORSHIP	A 032590	.00	5,210.00	19.91	5,229.91	.00	J14
KELLOGG FOUNDATION	A 032600	13,859.86	12,170.30	423.01CR	14,940.15	10,667.00	Q11
MARTIN LUTHER KING FUND	A 032601	925.00	.00	.00	300.00	625.00	Q11
MAINTENANCE OF ACADEMIC PROJECTS	A 032801	.00	635.28	52,243.80	52,879.08	.00	X00
MARINE STATION RENOVATION ACCOUNT	A 032820	.00	728.00	101,874.70	97,662.19	4,940.51	S11
MARINE STATION OPERATING ACCOUNT	A 032822	.00	.00	15,000.00	14,846.85	153.15	S11
MAKEPEACE FUND	A 032830	589.62	.00	.00	135.29	454.33	K28
HORACE MANN AWARD	A 032840	.00	.00	.00	.00	.00	Q11
MASSACHUSETTS FOOD EDUCATION	A 033050	.00	.00	284.53	.00	284.53	N13
MASS FOOD SERVICE COUNCIL	A 033100	1,371.51	.00	1,371.51CR	.00	.00	K10
MOTOR VEHICLE REGISTRATION ACCOUNT	A 033500	18,467.00	18,569.00	.00	25,235.53	11,800.47	FF5
MUNICIPAL BUILDING CONFERENCE	A 033600	932.44	.00	.00	932.44	.00	K11
NATIONAL STARCH AND CHEMICAL CORP	A 033801	924.49	.00	.00	214.91	709.58	K10
NDEA TEACHERS SERVICE CANCELLATION	A 033900	.00	856.28	856.28CR	.00	.00	F24

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 08 GENERAL PURPOSE FUND CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
08/01 UNRESTRICTED CURRENT FUNDS	CONTINUED						
NSF SCIENCE DEVELOPMENT	A 034000	225.86	.00	.00	225.86	.00	J11
OCEAN SPRAY INCOME ACCOUNT	A 034101	603.00	364.20	.00	269.20	698.00	B11
NURSERY SCHOOL LABORATORY	A 034120	2,902.77	5,866.67	.00	2,312.97	6,456.47	N15
OCEAN SPRAY PRINCIPAL ACCT	A 034201	3,340.00	1,635.00	.00	.00	4,975.00	B11
PRESIDENTS TRUST FUND	A 034900	968.29	.00	.00	871.62	96.67	J17
RECORDING INDUSTRIES PERFORMANCE	A 035150	916.61	399.29	.00	520.00	795.90	J19
REHABILITATION AND HOME CARE	A 035210	1,200.00	.00	.00	821.26	378.74	WW1
RESTAURANT AND HOTEL MANAGEMENT	A 035700	3,933.65	25,849.00	1,471.51	1,938.40	29,315.76	K17
HOTEL & RESTAURANT ADMIN. FIELD TRIP	A 035710	411.50	.00	.00	268.30	143.20	K17
TREVOR ROBINSON BIOCHEMISTRY	A 036600	258.02	200.00	.00	362.33	95.69	J22
SAGA DEVELOPMENT FUND	A 036850	1,650.00	.00	.00	700.00	950.00	K17
S B A CONFERENCE FUND	A 036901	.00	150.00	1,828.00	10.00	1,968.00	L11
SCHOOL OF ED 70-71	A 037250	.00	69.73	141,056.00	122,306.97	18,818.76	Q11
SCHOOL OF ENGINEERING EQUIPMENT	A 037300	303.75	.00	.75CR	303.00	.00	M11
SPERRY AND HUTCHINSON LECTURE FUND	A 037900	416.84	.00	.00	.00	416.84	J17
STOCKBRIDGE CLASS OF 1966	A 038202	3,377.48	198.67	.00	.00	3,576.15	AB1
STRENGTH TRAINING CLINIC FUND	A 038203	53.10	.00	.00	.00	53.10	Q11
SUMMER WORKSHOP IN EDUCATION	A 039701	2,093.13	.00	.00	2,015.66	77.47	Q11
NORTHEAST UTILITIES SERVICE CO	A 039950	.00	5,000.00	.00	.00	5,000.00	M13
TRUST FUND INTEREST/CLEARING	A 040490	.00	9,041.40	55,695.38	.00	64,736.78	A16
TRUST FUND PRESIDENTS OFFICE	A 040495	.00	.00	.00	.00	.00	A16
TRUST FUND INTEREST	A 040500	165,288.53	302,032.79	107,980.07CR	199,009.34	160,331.91	B11
UNDERGRADUATE OUTSTANDING TEACHING	A 040602	4,000.00	5,000.00	1,000.00CR	3,000.00	5,000.00	AB1
UNIVERSITY FUND	A 040700	9,718.36	12,750.00	.00	15,152.69	7,315.67	AB1
U OF M FOOTBALL	A 040720	.00	.00	200.00	.00	200.00	P14
UNIVERSITY OF MASS COURT CLUB	A 040730	.00	300.00	.00	.00	300.00	P14
UNIFORM RESALE FUND AF	A 097400	215.67	17.76	.00	49.42	184.01	RA1
08/01 UNRESTRICTED CURRENT FUNDS	TOTALS	604,105.19	1,453,533.96	457,824.93	1,841,134.20	674,329.88	
08/02 DEPARTMENTAL SERVICE FUNDS							
AGRICULTURAL ENGINEERING	A 024202	1,010.74	93.03	500.00	706.58	897.19	K04
BIOCHEMISTRY SERVICE FUND	A 025503	394.78	.00	500.00	240.24	654.54	J22
BOTANY SERVICE FUND	A 025802	3,441.41	.00	600.00	2,058.05	1,983.36	J33
CHEMICAL ENGINEERING	A 026900	8,490.40	32,310.28	1,568.01	25,331.95	17,036.74	M12
CIVIL ENGINEERING SERVICE FUND	A 026903	2,223.60	3,520.67	12,575.00	9,954.13	8,365.14	M13
COLLEGE OF AGRICULTURAL SERVICE FUND	A 028000	188.99	.00	30.00	134.20	84.79	K01
COLLEGE OF ARTS AND SCIENCES	A 028100	2,453.34	84.50	1,830.79	2,903.03	1,465.60	J11
COMPARATIVE LITERATURE	A 028250	.00	.00	500.00	330.06	169.94	J42
COOPERATIVE EXTENSION	A 028330	225.47	12,039.32	.00	7,437.84	4,826.95	K21

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 08 GENERAL PURPOSE FUND CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
08/02 DEPARTMENTAL SERVICE FUNDS	CONTINUED						
DEAN OF STUDENTS SERVICE FUND	A 028600	69.40	1.98	.00	71.38	.00	F21
DEPARTMENT OF CHEMISTRY SERVICE FUND	A 028800	16,681.15	6,767.86	1,000.00	10,460.58	13,988.43	J34
ENVIRONMENTAL HEALTH AND SAFETY	A 028810	30.00	.00	.00	.00	30.00	WW2
DEPARTMENT OF PUBLIC HEALTH SERVICE	A 028850	.11	335.00	60.00	321.99	73.12	WW1
GOVERNMENT SERVICE	A 028900	2,905.75	.00	1,250.00	391.89	3,763.86	J17
FORESTRY AND WILDLIFE MANAGEMENT	A 028901	548.63	.00	495.50	535.24	508.89	K11
ENGLISH SERVICE FUND	A 028903	1,921.06	125.00	2,000.00	3,927.01	119.05	J14
ELECTRICAL ENGINEERING	A 028904	.00	797.00	5,875.00	3,682.92	2,989.08	M15
FOOD SCIENCE AND TECH SERVICE FUND	A 029400	323.14	.00	500.00	300.16	522.98	K10
GEOLOGY SERVICE FUND	A 030800	1,060.75	3,001.50	1,000.00	4,451.54	610.71	J36
GERMAN DEPARTMENT FUND	A 031100	2,935.56	1.91	1,000.00	1,637.61	2,299.86	J16
GRADUATE SCHOOL SERVICE	A 031400	26.80	.00	120.00	76.60	70.20	S11
HISTORY SERVICE FUND	A 031403	1,706.96	9.25	2,450.00	2,759.62	1,406.59	J18
HOME ECONOMICS	A 031700	2,577.63	50.50	239.53CR	692.42	1,696.18	N11
INDUSTRIAL ENGINEERING FUND	A 032400	507.83	200.00	2,030.00	1,284.53	1,453.30	M16
LABOR CENTER SERVICE	A 032605	7,513.59	4,596.50	500.00	4,586.69	8,023.40	T11
MARINE SERVICE FUND	A 032802	449.79	.00	.00	347.15	102.64	S18
MATHEMATICS SERVICE FUND	A 033103	4,241.72	.00	2,450.00	4,312.39	2,379.33	J37
MECHANICAL AND AEROSPACE	A 033105	4,085.32	2,882.83	6,620.00	7,426.80	6,161.35	M14
MICROBIOLOGY SERVICE FUND	A 033300	1,168.96	50.80	1,500.00	1,981.33	738.43	J32
PHILOSOPHY SERVICE FUND	A 034402	2,810.79	.00	967.71	2,545.16	1,233.34	J20
PHYSICS SERVICE FUND	A 034403	10,550.15	17,644.71	2,587.40	23,815.13	6,967.13	J38
PLACEMENT OFFICE SERVICE FUND	A 034500	781.24	534.60	.00	1,202.50	113.34	F24
PLANT PATHOLOGY SERVICE/AMHERST	A 034550	.00	45.00	500.00	.00	545.00	K76
PLANT AND SOIL SCIENCES	A 034600	1,403.10	47.36	1,000.00	2,013.81	436.65	K88
POLYMER AND ENGINEERING SERVICE FUND	A 034602	1,434.41	.00	1,097.00	1,798.08	733.33	S17
PSYCHOLOGY SERVICE FUND	A 035100	3,884.35	210.81	3,541.00	5,907.22	1,728.94	J21
ROMANCE LANGUAGE SERVICE FUND	A 036700	2,392.61	.00	200.00	1,265.65	1,326.96	J23
SCHOOL OF BUSINESS ADMINISTRATION	A 036900	14,623.94	3,565.48	258.00CR	4,699.48	13,231.94	L11
SCHOOL OF EDUCATION SERVICE FUND	A 037100	2,360.96	4,086.92	66,324.73	35,948.65	36,823.96	Q11
SCHOOL OF ENGINEERING SERVICE FUND	A 037500	9,507.25	6.50	6,090.75	8,906.09	6,698.41	M11
SCHOOL OF NURSING FUND	A 037700	285.27	.00	189.85	113.01	362.11	O11
SCHOOL OF PHYSICAL EDUCATION	A 037701	193.24	.00	60.00	20.08	233.16	P11
SOCIOLOGY AND ANTHROPOLOGY	A 037702	2,002.89	.00	500.00	637.70	1,865.19	J24
SPANISH SERVICE TRUST FUND-AMHERST	A 037750	.00	.00	250.00	155.08	94.92	J30
SPEECH SERVICE FD	A 037802	1,143.39	17,771.83	6,750.00	18,617.66	7,047.56	J25
STAFF PHYSICIANS SERVICE FUND	A 038200	940.53	1,250.00	.00	188.08	2,002.45	V11
VET AND ANIMAL SCIENCE FUND	A 041002	3,432.54	.00	500.00	1,664.51	2,268.03	K15
ZOOLOGY SERVICE FUND	A 041202	8,594.10	.00	1,738.32	4,668.51	5,663.91	J39

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 08 GENERAL PURPOSE FUND

CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
08/02							
08/02 DEPARTMENTAL SERVICE FUNDS	TOTALS	133,523.64	112,031.14	138,753.53	212,510.33	171,797.98	
08/03 OPERATING ACCOUNTS							
AID/AFT 281	A 023900	64,552.51	.00	48,789.66CR	8,760.28	7,002.57	AB1
AID/CSD 399	A 023901	4,425.26	1,835.54	.00	3,372.37	2,888.43	K21
AID/AFT 437	A 023902	24,263.51	.00	22,768.55CR	1,494.96	.00	AB1
ENGINEERING RESEARCH INSTITUTE	A 029000	2,779.75	1,742.92	33.37	.00	4,556.04	M11
IAIM OPERATING	A 032202	5,366.17	125.30	2,120.02	6,000.62	1,610.87	K57
IEP OPERATING	A 032204	157.34	.00	.00	.00	157.34	J21
OCD PS 64 151 OPERATING	A 034002	311.62	.00	311.62CR	.00	.00	AB1
OCD PS 65 87 OPERATING	A 034003	29,742.95	2,500.00	29,787.95CR	2,455.00	.00	AB1
PRI OPERATING	A 034401	9,477.47	2,644.37	16,917.00	12,016.77	17,022.07	S17
RESEARCH TRUST FUND	A 035505	336,603.47	2,194.07	251,593.12CR	65,938.52	21,265.90	B11
UPWARD BOUND AMHERST 1967	A 041110	1,591.43	.00	1,591.43CR	.00	.00	AB1
UPWARD BOUND AMHERST 1968	A 041120	14,391.14	.00	12,641.14CR	1,750.00	.00	AB1
UPWARD BOUND AMHERST 1969	A 041150	2,436.00	.00	2,436.00CR	.00	.00	AB1
UPWARD BOUND AMHERST 1970	A 041180	6,040.25	.00	6,040.25CR	.00	.00	AB1
NONR 3357 OPERATING	A 067203	509.25CR	.00	3,026.00	2,501.18	15.57	S17
SCHOOL OF ENGINEERING/AMHERST	A 067414	11,398.07	304.38	5,169.54CR	5,315.04	1,217.87	M11
NSF GP 14690 OPERATING	A 090001	29.63	.00	.00	.00	29.63	J38
NSF GP 15282 OPERATING	A 090022	4,250.00	.00	4,250.00	2,831.16	5,668.84	J39
08/03 OPERATING ACCOUNTS	TOTALS	517,307.32	11,346.58	354,782.87CR	112,435.90	61,435.13	
SECT-08 GENERAL PURPOSE FUND		1,254,936.15	1,576,911.68	241,795.59	2,166,080.43	907,562.99	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 09 GIFTS & GRANTS PENDING TRUSTEE ACTION

A C C O U N T N A M E	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
HAROLD W CARY/AMHERST	A 026501	794.00	.00	.00	794.00	.00	J18
CLASS OF 1911 STUDENT LOAN/AMHERST	A 026510	.00	2,702.78	.00	.00	2,702.78	B11
MARY MAHAR SCHOLARSHIP/AMHERST	A 031450	.00	6,202.85	.00	6,202.85	.00	D11
OREANA MERRIAM EDUCATIONAL FUND	A 033201	1,623.02	.00	.00	.00	1,623.02	N11
METAWAMPEE FUND	A 033202	1,050.00	.00	.00	1,050.00	.00	D11
BEN B SELIGMAN MEMORIAL/AMHERST	A 035110	.00	1,713.00	.00	.00	1,713.00	T11
THE FRANK R. SHAW FUND.	A 035120	808.00	40.00	.00	848.00	.00	K29
LAWRENCE D RHODES	A 035403	45.00	.00	.00	.00	45.00	B11
JOHN F THOMPSON MEMORIAL FUND	A 040001	100.00	.00	.00	.00	100.00	B11
BARRY LEE WOLK MEMORIAL	A 041109	30.00	.00	.00	.00	30.00	J17
SECT-09 GIFTS & GRANTS PENDING TRUSTEE ACTION		4,450.02	10,658.63	.00	8,894.85	6,213.80	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 10 LIBRARY FUNDS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
BOOK REPLACEMENT FUND	A 025701	1,465.62	4,293.85	.00	1,988.40	3,771.07	G11
MILTON C DAVIS MEMORIAL FUND/AMHERST	A 028510	.00	5,155.00	.00	.00	5,155.00	G11
HOTEL & RESTAURANT LIBRARY FUND	A 032200	255.49	.00	.00	49.15	206.34	K17
MEMORIAL LIBRARY JFK	A 032550	.00	11,313.50	.00	.00	11,313.50	G11
LANDSCAPE ARCHITECTURE LIBRARY FUND	A 032603	1,958.15	.00	1,958.15CR	.00	.00	K12
FRIENDS OF THE LIBRARY	A 032680	300.00	26,677.00	500.00	1,825.52	25,651.48	G11
LIBRARY BINDING	A 032690	.00	594.15	.00	479.50	114.65	G11
LIBRARY FUND	A 032700	5,570.13	975.79	38.70	6,528.55	56.07	G11
MORRILL SCIENCE LIBRARY FUND	A 033700	125.00	.00	.00	.00	125.00	G11
RAYMOND H OTTO LIBRARY FUND/AMHERST	A 035140	.00	1,899.00	1,958.15	113.98	3,743.17	K12
J W SWANSON MEMORIAL/AMHERST	A 040910	.00	1,666.50	.00	.00	1,666.50	G11
BRUCE WARNER LIBRARY FUND	A 041102	109.15	.00	.00	.00	109.15	G11
SECT-10 LIBRARY FUNDS		9,783.54	52,574.79	538.70	10,985.10	51,911.93	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 11 MISCELLANEOUS SERVICE FUNDS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
INSTITUTIONAL ALLOWANCE GENERAL	A 010800	108,611.38	4,510.63	54,442.95	114,719.51	52,845.45	S11
ALUMNI TRUST	A 024303	12,741.02	94,362.56	4,470.79	87,900.93	23,673.44	AA5
BOTANY XEROX SERVICE FUND	A 025800	4,751.23	1,310.51	.00	5,700.00	361.74	J33
BROAD JUMP	A 026050	21,990.92	89,129.60	1.34CR	110,859.01	260.17	Q11
COP-WORCESTER	A 026550	.00	123,495.35	5,377.59CR	113,134.10	4,983.66	Q11
COP CITY OF NEW YORK	A 026551	.00	308,412.00	95,396.15CR	213,015.85	.00	Q11
CENTER STUDY EDUCATIONAL INNOVATIONS	A 026660	569.61	.00	569.61CR	.00	.00	Q11
CSEI TITLE III BELLOWS FALLS	A 026661	13.38	.00	13.38CR	.00	.00	Q11
CSEI EDUCATION & CULTURAL CENTER	A 026662	625.00	.00	625.00CR	.00	.00	Q11
CSEI GLOBE NEWSPAPER COMPANY	A 026663	588.05	.00	327.82CR	260.23	.00	Q11
MONTPELIER PUBLIC SCHOOLS	A 026664	316.28	.00	316.28CR	.00	.00	Q11
CSEI TITLE III STAMFORD	A 026665	73.24CR	.00	73.24	.00	.00	Q11
CSEI NETWORK	A 026666	245.00	6,751.01	5,304.95	11,859.51	441.45	Q11
CENTER FOR URBAN EDUCATION	A 026680	.00	7,000.00	.00	3,100.00	3,900.00	Q11
COASTAL RESEARCH GROUP/AMHERST	A 026750	.00	1,611.45	.00	938.40	673.05	J36
COMPUTER TRUST FUND	A 028300	118,482.47	173,847.13	607,338.83	797,150.74	102,517.69	S12
ENGINEERING HYBRID COMPUTER TRUST	A 028902	23.62	760.00	.00	267.31	516.31	J34
INNOVATIONS FILMS FUND	A 032501	3,908.53CR	18,398.95	146.48CR	14,336.45	7.49	Q11
MATHEMATICS XEROX SERVICE FUND	A 033102	2,703.80	2,212.85	956.40CR	2,300.32	1,659.93	J37
PHOTO CENTER TRUST ACCOUNT/AMHERST	A 034350	.00	7,391.90	.00	2,037.64	5,354.26	AA3
RCS GENERAL	A 035550	3,757.09	1,466.50	19,592.79	19,842.84	4,973.54	S11
RCS RESEARCH COORDINATOR	A 035580	350.00	20.71	29,887.56	21,198.84	9,059.43	S11
RCSA ELECTRONICS SHOP	A 035599	.00	360.00	685.00	466.80	578.20	S11
RCS GLASS SHOP	A 035600	1,988.51	6,890.42	685.00CR	3,021.28	5,172.65	J34
RCS CHEMICAL ANALYSIS	A 035601	992.68	13,432.65	116.19CR	8,457.49	5,851.65	J34
STREPTOCOCCI LAB TRUST FUND/AMHERST	A 040400	.00	22,060.82	267.21CR	31,460.37	9,666.76CR	J32
UNIVERSITY COPY CENTER	A 040603	1,445.86	179,291.40	170.14CR	159,428.86	21,138.26	B16
UNIVERSITY DAY CARE CENTER	A 040610	.00	.00	3,500.00	.00	3,500.00	AB1
UNIVERSITY PRESS COMMITTEE	A 041100	71,613.43	81,607.96	155,271.37	234,767.86	73,724.90	S15
VOCATIONAL COUNSELING	A 041201	1,324.87	5,923.75	.00	5,471.92	1,776.70	F26
NSF INST GU 3448 ELECTRONICS	A 077120	.00	.00	.00	.00	.00	S11
NSF GU 3448 PRIOR LIABILITIES	A 087116	.00	.00	.00	.00	.00	S11
NSF INST GU 3448 GLASS SHOP	A 087117	.00	.00	27,013.93	27,013.93	.00	S11
NSF INST GU 3448 CHEMICAL ANALYSIS	A 087118	.00	.00	14,835.85	14,835.85	.00	S11
NSF INST GU 3448 PHYSICS	A 087119	.00	.00	9,822.50	9,822.50	.00	S11
NSF INST GU 3448 SECRETARIAT	A 087120	.00	112.55	9,250.66	9,363.21	.00	S11
NSF INST GRANT ELECTRONICS	A 087121	.00	266.00	11,200.41	11,466.41	.00	S11
NSF INST GU 3448	A 087122	.00	.00	.00	.00	.00	S11
SECT-11 MISCELLANEOUS SERVICE FUNDS		349,152.43	1,150,626.70	847,722.24	2,034,198.16	313,303.21	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 12 STUDENT PROGRAMS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
ACADEMIC THEATRE	A 024100	1,104.07	9,228.55	500.00	10,085.96	746.66	J25
ARCHOEOLOGY FIELD SCHOOL	A 024800	1,616.94	6,363.00	900.00	2,661.71	6,218.23	J27
BAR REVIEW COURSE	A 025501	33.60	1,900.00	.00	1,933.44	.16	F11
BOLOGNA SUMMER SESSION 1969	A 026005	1,958.76CR	2,250.00	291.24CR	.00	.00	E20
BOLOGNA SUMMER SESSION 1970	A 026006	11,430.00	3,992.37	.00	13,210.00	2,212.37	E20
BOLOGNA 1971- AMHERST	A 026007	.00	32,125.00	800.00	29,394.51	3,530.49	E20
CHAMBER MUSIC SUMMER 1970	A 026820	72.60	.00	.00	.00	72.60	J19
COMMENCEMENT FUND	A 026902	61,569.91	50,084.50	30,190.00CR	39,314.98	42,149.43	A13
CUBAN REFUGEE	A 028400	375.00	7,000.00	.00	7,000.00	375.00	F24
DANFORTH FOUNDATION RESIDENCE	A 028500	280.25	.00	.00	76.37	203.88	D01
FINE ARTS FEE ACCOUNT	A 029002	12,720.48	139,782.09	3,129.38CR	146,401.29	2,971.90	E19
FOREIGN PROGRAMS	A 030401	13,384.79	280.00	8,435.77CR	456.00	4,773.02	E20
FOREIGN PROGRAMS ADMINISTRATIVE	A 030402	.00	352.00	1,477.01	1,729.01	100.00	E20
FOREIGN STUDENTS ADVISOR	A 030500	.00	.00	.00	.00	.00	E11
FREIBURG SUMMER PRO-SUMMER 1970	A 030550	2,508.45	665.00	.00	3,015.20	158.25	E20
FRIEBURG 1971	A 030551	.00	13,100.00	1,600.00	10,450.00	4,250.00	E20
FREIBURG 1970	A 030605	208.48	.00	.00	66.00	142.48	E20
FREIBURG 1970-1971	A 030606	4,150.25	5,188.23	21,480.09	28,529.43	2,289.14	E20
FREIBURG 1971-1972	A 030607	.00	6,350.00	.00	475.00	5,875.00	E20
GRADUATE STUDENT SENATE	A 031301	3,738.95	9,433.14	4,700.00CR	4,418.47	4,053.62	Z19
GRADUATE STUDENT GENERAL FEE	A 031303	245.00	.00	.00	.00	245.00	S11
IDENTIFICATION CARD	A 032300	14,900.30	24,243.50	.00	16,689.48	22,454.32	F21
JAPANESE SUMMER 1967	A 032503	45.84	.00	.00	.00	45.84	E20
JAPANESE SUMMER 1969	A 032504	138.41	.00	.00	.00	138.41	E20
JAPANESE SUMMER INSTITUTE 1970	A 032505	.00	11,275.00	.00	8,105.98	3,169.02	E20
LAW ENFORCEMENT EDUCATIONAL	A 032607	800.00	1,500.00	.00	.00	2,300.00	F24
MADRID 1970	A 032703	3,780.39	.00	.00	2,561.95	1,218.44	E20
MADRID 1971	A 032704	.00	25,466.00	2,800.00	19,820.16	8,445.84	E20
MARCHING BAND	A 032850	2,741.85	24.50	3,000.00	5,689.59	76.76	J19
MASS LEGISLATIVE INTERNSHIP	A 033000	9,733.49	.00	990.80	10,724.29	.00	B12
NANTUCKET	A 033702	278.19	.00	.00	.00	278.19	E18
OPERETTA GUILD VALUABLE MEMBER	A 034203	.00	.00	.00	.00	.00	F24
OXFORD SUMMER 1970	A 034304	13,617.61	.00	250.00	13,851.00	16.61	E20
OXFORD SUMMER 1971	A 034305	.00	80,692.00	1,300.00	73,441.00	8,551.00	E20
PAU SUMMER 1970	A 034321	6,053.65	3,500.00	1,000.00	5,297.50	5,256.15	F20
PAU 1971	A 034322	.00	16,245.00	.00	6,860.00	9,385.00	F20
PLANT PATHOLOGY GRADUATE	A 034501	50.00	.00	.00	.00	50.00	K16
ROTC ARMY COMMUTATION UNIFORM	A 035400	765.31	2,376.00	.00	2,852.51	288.80	R81
AF COMMUTATION UNIFORM	A 035402	2,306.37	2,918.00	.00	2,888.67	2,335.70	RA1
RESIDENCE HALL CULTURAL ENRICHMENT	A 035604	115.48	.00	2,756.68	2,450.63	421.53	F21
ROOM SECURITY	A 036800	.00	.00	.00	.00	.00	F29

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 12 STUDENT PROGRAMS CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
	CONTINUED						
RECOGNIZED STUDENT ORGANIZATIONS	A 039100	196,632.30	979,499.24	207,709.58	1,116,500.65	267,340.47	Z14
SUMMER ACTIVITIES SUMMER	A 039700	19,271.94	46,496.40	390.00	46,678.22	19,480.12	U11
U OF M STUDENT SENATE / CCEBS	A 041000	.00	30,000.00	.00	29,764.96	235.04	F20
YEAR STUDY IN FRANCE 1972	A 041214	.00	13,168.00	.00	1,200.00	11,968.00	C23
COLLEGE WORK STUDY	A 069500	52,649.44	119,645.56	408,061.94	566,061.68	14,295.26	F24
SECT-12 STUDENT PROGRAMS		435,360.58	1,645,143.08	608,269.71	2,230,655.64	458,117.73	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 13 SPONSORED RESEARCH

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
ABBOTT	A 042800	4,926.88	.00	.00	1,549.80	3,377.08	K15
AGWAY ENGINEERING	A 042803	1,740.10	3,116.00	.00	1,897.78	2,958.32	K04
AGWAY BORTON FUND	A 042804	.00	2,000.00	.00	.00	2,000.00	K15
AGWAY CRANBERRY	A 042902	529.94	.00	.00	529.94	.00	K60
AGWAY DLA FUND	A 042903	276.82	2,850.00	.00	2,362.07	764.75	K15
AGWAY FENNER	A 042904	1,272.28	3,000.00	.00	2,292.39	1,979.89	K15
AGWAY PLANT SCIENCE	A 042905	1,998.80	5,000.00	.00	2,771.98	4,226.82	K09
AGWAY JENSEN	A 042906	.00	500.00	.00	.00	500.00	K62
AQUACULTURAL RESEARCH	A 043105	68.33	.00	.00	68.33	.00	K60
BEECHNUT FUND	A 043201	5,513.81	12,000.00	297.65	4,103.49	13,707.97	K10
BIOZONICS CORP	A 043350	652.40CR	.00	692.50	40.10	.00	K10
BORDEN CHEMICAL	A 043400	3,194.89	1,601.91	.00	3,173.61	1,623.19	K15
BOURNE	A 043700	2,016.43	456.35	.00	407.09	2,065.69	K07
CAPE COD	A 044100	16,664.66	6,600.00	117.46CR	8,783.34	14,363.86	K60
CARNATION	A 044500	256.04	75.00	.00	211.09	119.95	K73
CHEMAGRO GRANT FUND	A 044800	.00	300.00	.00	300.00	.00	K60
CHEVRON CHEMICAL 2	A 045002	28.70	.00	16.81CR	11.89	.00	K09
CHEVRON CHEMICAL 3	A 045200	348.76	.00	.00	348.76	.00	K60
HEUBLEIN	A 045250	13,332.61	48,002.50	99.41CR	19,560.35	41,675.35	K10
KIMBERLY CLARK MUELLER	A 045300	534.89	.00	.00	114.33	420.56	K13
KIMBERLY CLARK LITSKY	A 045400	8,781.63	17,042.00	117.46CR	14,054.84	11,651.33	K13
CONSOLIDATED EDISON CO OF NEW YORK	A 045903	.00	1,000.00	.00	347.75	652.25	K11
CONSUMER RESEARCH INSTITUTE AMHERST	A 045950	.00	1,427.36	.00	1,427.36	.00	L15
CONTROL DATA CORP M10AA	A 045951	.00	.00	7,491.20	5,575.10	1,916.10	S12
CORN INDUSTRIES	A 046300	297.65	.00	297.65CR	.00	.00	K10
CORN PRODUCTS FOOD TECHNOLOGY	A 046302	22.03	.00	.00	21.00	1.03	K73
DAIRY GENETICS	A 047800	1,372.70	5,120.00	.00	3,921.56	2,571.14	K15
FOOD MART FUND/AMHERST	A 048501	.00	3,000.00	.00	2,683.50	316.50	K03
FURUKAWA RESEARCH	A 048610	5,114.00	.00	.00	1,881.00	3,233.00	S17
GEIGY CHEMICAL CORP	A 048800	5,400.56	315.15	57.94CR	2,528.30	3,129.47	K13
GEIGY DOG TICK FUND	A 048803	500.00	.00	.00	139.64	360.36	K73
GEIGY FORESTRY	A 048804	960.05	.00	.00	108.50	851.55	K11
GENERAL TIRE & RUBBER	A 048900	14,109.72	.00	.00	83.67	14,026.05	J34
HERCULES KARASZ	A 049511	1,500.00	.00	.00	.00	1,500.00	S17
HOLYOKE WATER POWER	A 049902	2,000.00	600.00	.00	1,940.60	659.40	K11
HUNTER ASSOCIATES LABORATORY-AMHERST	A 050101	.00	6,000.00	.00	1,071.81	4,928.19	K10
KERATENE	A 050600	4,193.05	.00	.00	165.38	4,027.67	K10
LEDERLE FUND	A 050700	5,600.08	.00	.00	2,049.32	3,550.76	K15
LEUCOSIS	A 050900	16,652.00	.00	.00	11,478.86	5,173.14	K70
LESTOIL PRODUCTS	A 051000	201.83	.00	.00	201.83	.00	K70
LILLY RESEARCH LABORATORIES/AMHERST	A 051003	.00	4,000.00	.00	591.38	3,408.62	J32

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 13 SPONSORED RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE CONTINUED	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
TOWN OF MARION	A 051006	.00	2,490.00	.00	2,481.08	8.92	K04
MASS GOLFASSOCIATION	A 051102	454.50	1,700.00	.00	1,042.79	1,111.71	K09
MASS HEART	A 051103	206.97CR	4,873.00	.00	4,666.03	.00	P12
MECHANICAL ENGINEERING	A 051501	2,511.98	.00	.00	963.05	1,548.93	M11
MEDICAL RESEARCH	A 051503	894.07	486.67	.00	328.56	1,052.18	J22
TOWN OF MATTAPOISETT	A 051506	.00	2,490.00	.00	2,178.17	311.83	K04
MERCK SHARP DOHME MCEWEN	A 051550	1,000.00	.00	.00	722.89	277.11	J34
MILK CHECK	A 051800	256.33	.00	.00	254.15	2.18	K15
MITRE CORP	A 051850	509.50CR	9,500.00	.00	8,838.83	151.67	Q11
MITRE CORP. #2	A 051851	5,878.10CR	6,634.87	28.97CR	727.80	.00	Q11
MOBIL CHEMICAL	A 051900	99.88	.00	.00	99.88	.00	J34
MONSANTO CHEMICAL	A 052100	2,955.28	1,000.00	.00	1,730.89	2,224.39	J34
MONSANTO HERBICIDE FUND	A 052101	500.00	.00	.00	301.86	198.14	K60
MONSANTO POLYMER	A 052102	5,782.42	2,500.00	.00	1,051.26	7,231.16	J34
NANTUCKET STUDY	A 052123	50.68	.00	.00	50.68	.00	K12
NORTON	A 052600	606.90	.00	.00	298.74	308.16	K13
NORWICH	A 052700	149.16	.00	.00	149.16	.00	K15
OCEAN SPRAY CRANBERRY	A 052900	19,160.42	5,130.05	1.30CR	17,707.35	6,581.82	K10
PILCH DE KALB INC	A 052902	.00	10,000.00	.00	3,423.76	6,576.24	K15
OLIN CORPORATION	A 052905	975.71	.00	692.50CR	270.71	12.50	K10
PFIZER	A 054900	4,511.24	.00	.00	431.43	4,079.81	K15
POLYMER SCIENCE & ENGINEERING	A 055200	16,529.09	46,100.00	.00	17,623.16	45,005.93	S17
POULTRY VACCINE	A 055400	8,062.03	5,745.00	.00	6,034.18	7,772.85	K73
SANDOZ WANDER FUND	A 056401	.00	2,000.00	.00	56.86	1,943.14	K60
SHELL CHEMICAL	A 057100	2,840.73	.00	.00	128.17	2,712.56	K07
SHELL WALTHAM	A 057210	.00	500.00	.00	30.15	469.85	K73
T H CHEMICAL CRANBERRY	A 058102	435.43	.00	.00	435.43	.00	K60
T H CHEMICAL HERBICIDE	A 058103	12.61	.00	.00	12.61	.00	K09
TAKEDA CHEMICAL	A 058200	3,191.60	.00	.00	643.34	2,548.26	K10
VANDERBILT CRANBERRY	A 058201	100.00	.00	.00	100.00	.00	K60
UNIROYAL	A 058204	606.72	.00	.00	593.61	13.11	K60
UPJOHN-O.W. FUND	A 058207	.00	3,000.00	.00	.00	3,000.00	K87
VEGETABLE CROPS	A 058400	3,591.16	.00	.00	963.29	2,627.87	K09
TOWN OF WAREHAM SHELLFISH PROGRAM	A 058410	.00	200.00	.00	196.41	3.59	K04
WARNER BURNS TOAN LUNDE RESEARCH	A 058420	37.31	.00	.00	37.31	.00	K12
WEED BIOLOGY	A 058430	500.00	250.00	.00	.00	750.00	K09
WESTERN MASS ELECTRIC CO. FUND	A 058540	.00	870.00	.00	749.33	120.67	K12
WESTFIELD RIVER PAPER COMPANY	A 058550	58.20	100.00	.00	44.69	113.51	W11
SECT-13 SPONSORED RESEARCH		188,035.72	229,575.86	7,051.85	174,165.35	250,498.08	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 14 U OF M SPONSORED RESEARCH

A C C O U N T N A M E	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
FACULTY RESEARCH GRANTS	A 023800	39,339.04	196.86	89,497.75	69,301.27	59,732.38	T14
SECT-14 U OF M SPONSORED RESEARCH		39,339.04	196.86	89,497.75	69,301.27	59,732.38	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
ACADEMY OF APPLIED SCIENCE/AMHERST	A 042802	.00	.00	5,000.00	4,556.49	443.51	M13
ALBANY MEDICAL COLLEGE	A 042910	.00	1,613.03	4,000.00	5,237.38	375.65	M16
AMERICAN CANCER SOCIETY P554	A 043003	1,898.53CR	25,150.76	4,840.71CR	15,914.50	2,497.02	J22
AMERICAN CANCER SOCIETY-WILDER	A 043004	.00	9,257.00	1,207.00CR	7,721.36	328.64	J32
AMERICAN CANCER SOCIETY- PARSONS	A 043005	.00	9,717.00	1,268.39CR	1,581.32	6,867.29	J22
AMERICAN PETROLEUM INSTITUTE 155	A 043100	548.97	.00	.00	39.86	509.11	J36
AMERICAN POTASH	A 043102	401.24	.00	.00	391.74	9.50	K09
ARTHRITIS FOUNDATION AMHERST	A 043106	.00	8,935.00	.00	3,301.76	5,633.24	K15
ANISA-HUMAN POTENTIAL	A 043120	.00	.00	.00	.00	.00	Q11
BOSTON MARKET GARDEN SEED IMP	A 043500	1,779.39	1,500.00	.00	1,451.62	1,827.77	K73
BUREAU OF GOVERNMENT RESEARCH	A 043900	5,724.83	100.00	.00	1,550.19	4,274.64	J13
CAM BALLSTON SPA	A 043905	.00	3,950.00	.00	.00	3,950.00	Q11
CAM INDEPENDENT SCHOOL DISTRICT 274	A 043910	.00	1,500.00	.00	.00	1,500.00	Q11
CAM- LEVITTOWN / AMHERST	A 043915	.00	1,700.00	.00	.00	1,700.00	Q11
CAM NASSAU COUNTY	A 043920	.00	9,500.00	.00	.00	9,500.00	Q11
CAM N.Y. INSTITUTE TECHNOLOGY	A 043930	.00	5,000.00	.00	.00	5,000.00	Q11
CAM WESTCHESTER	A 043950	2,600.00	400.00	.00	51.24	2,948.76	Q11
CAM. WESTCHESTER-1971. AMHERST	A 043951	.00	3,025.00	.00	228.61	2,796.39	Q11
CAMPBELL INSTITUTE FOOD RESEARCH	A 044000	427.68	.00	.04CR	427.64	.00	K10
CARNEGIE FUND	A 044600	2,568.27	.00	.00	581.34	1,986.93	J14
CENTER FOR HUMANISTIC EDUCATION	A 044650	.00	.00	.00	.00	.00	Q11
CHRONIC RESPIRATORY DISEASE	A 044700	3,342.14	.00	.00	1,642.73	1,699.41	K15
COLUMN RESEARCH	A 045600	.22	.00	.22CR	.00	.00	M13
COOP FISH PROJECT 3601-09-13	A 046100	5,123.36	20,000.00	.00	18,277.22	6,846.14	K11
COTTRELL- HIXON	A 046500	.00	5,000.00	.00	.00	5,000.00	J34
COTTRELL HUGUENIN-RESEARCH/AMHERST	A 046600	.00	73,000.00	.00	11,639.74	61,360.26	J38
RESEARCH CORP COTTRELL MCGILL	A 046700	432.87	.00	.00	174.96	257.91	J36
ECONOMIC DEVELOPMENT SERVICES	A 047810	.00	500.00	885.00	805.00	580.00	L16
MASS DEPT EDUCATION JOHNSON	A 047850	712.50CR	30,000.00	207.86CR	29,079.64	.00	Q11
DEPT. OF EDUCATION-JOHNSON	A 047851	.00	86,451.98	971.66CR	67,517.32	17,963.00	Q11
DEPT. OF EDUCATION-ROSSMAN	A 047855	.00	16,000.00	.00	9,350.14	6,649.86	Q11
EDUCATIONAL TRNG PRO - FLORIDA	A 048000	208.06	.00	.00	207.63	.43	Q11
CLINICAL PROFESSOR - FLORIDA	A 048001	.00	5,000.00	.00	1,980.00	3,020.00	Q11
STATE OF FLORIDA TRAINING PROGRAM	A 048002	.00	7,000.00	.00	6,999.67	.33	Q11
RESEARCH CORP ENGINEERING	A 048100	1,542.09	.00	.00	.00	1,542.09	M13
ESSO EDUCATION FOUNDATION	A 048200	7,916.84	.00	.00	4,885.83	3,031.01	Q11
FEDERAL CITY DIST OF COLUMBIA	A 048300	.00	30,000.00	1,243.02CR	13,377.78	15,379.20	Q11
JOSEPH FELS FOUNDATION	A 048400	.00	8,329.00	.00	8,129.11	199.89	Q11
FRANKLIN COUNTY PUBLIC HOSPITAL	A 048602	.00	.00	262.71	238.80	23.91	J24
FRASCH FOUNDATION	A 048603	1,525.50	8,000.00	.00	6,847.65	2,677.85	J22
FORD FOUNDATION 690-0511	A 048604	10,007.07	3,292.75	4,402.85CR	8,896.97	.00	Q11

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS CONTINUED

ACCOUNT NAME	ACCOUNT CODE CONTINUED	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
FORD FOUNDATION HUMANISTIC EDUCATION	A 048605	.00	76,250.00	641.99CR	67,295.47	8,312.54	Q11
GLYCERINE PRODUCERS ASSOCIATION	A 049100	.00	13,700.00	.00	2,642.11	11,057.89	K13
GRAYSON FOUNDATION	A 049200	5,725.43	.00	166.61	5,250.13	641.91	K15
GULF OIL	A 049300	3,243.51	.00	.00	1,043.81	2,199.70	K09
GULF OIL FOUNDATION	A 049301	.00	5,000.00	.00	.00	5,000.00	J34
JOHN W HILL FOUNDATION	A 049600	9,969.25	.00	.00	9,523.95	445.30	K13
JOSEPH HILL FOUNDATION	A 049602	319.05	.00	.00	270.00	49.05	K73
HOLYOKE TRUST	A 050000	49.39	43.78	.00	65.95	27.22	J13
INTEGRATED DAY CONSORTIUM	A 050300	.00	.00	.00	.00	.00	Q11
JET PROPULSION LABORATORY	A 050410	.00	.00	820.00	400.00	420.00	J36
KETTERING 642 CRAM	A 050503	7,067.62	.00	13,701.79	20,279.04	490.37	Q11
KETTERING 648 MICRO	A 050504	184.73	.00	.00	.00	184.73	Q11
CAROL BUTTENWIESER LOEB	A 051001	690.54	.00	.00	620.00	70.54	T15
LINK	A 051002	.14	.00	.14CR	.00	.00	M13
LOWELL MODEL CITIES	A 051005	2,512.73	6,750.00	26.34CR	8,609.73	626.66	Q11
MARINE RESEARCH FOUNDATION-AMHERST	A 051007	.00	100.00	.00	92.85	7.15	K60
LOWER PIONEER VALLEY REGIONAL	A 051101	6,112.97	2,069.30	903.00CR	1,814.55	5,464.72	L16
EVALUATION OF ADULT BASIC ED. PROG.	A 051104	1,638.12	13,750.00	.00	13,972.27	1,415.85	Q11
MASS. FLOWER GROWERS RESEARCH FUND	A 051105	.00	1,513.00	51.13	900.00	664.13	K13
MASS MERCHANDISING	A 051200	4,168.83	1,043.00	1,000.00CR	776.13	3,435.70	L11
MASS SOCIETY PROMOTING AGRICULTURE	A 051202	12.80	.00	.00	12.80	.00	K09
MASS SOC PROMOTING AGR WALTHAM	A 051203	2,886.00	.00	.00	1,643.95	1,242.05	K73
MASS TUBERCULOSIS HEALTH LEAGUE	A 051301	1.32	3,450.00	450.00CR	2,998.86	2.46	K15
MASS DEPT OF YOUTH SERVICES	A 051430	.00	.00	3,000.00	2,480.75	519.25	Q11
NE DISTRIBUTIVE EDUCATION	A 051440	.00	16,962.50	.00	1,361.75	15,600.75	Q11
MASS DIVISION WATER POLLUTION	A 051450	138.46CR	32,434.62	3,523.68	35,819.84	.00	M13
MASS DIV WATER POLLUTION WATER CRAFT	A 051451	138.46CR	20,999.51	262.36CR	17,414.64	3,184.05	M13
MASS DIV POLLUTION BOTTOM DEPOSIT	A 051452	813.27CR	37,775.57	6,494.94	43,457.24	.00	M13
MASS NURSERYMENS	A 051500	605.08	.00	.00	571.14	33.94	K09
MEDICAL CARE RESEARCH	A 051504	4,477.76	357.85	469.25CR	3,592.92	773.44	J24
MERCK COMPANY	A 051505	5,000.00	.00	.00	2,243.30	2,756.70	J34
MASS WATER RESOURCES COMM LARSON	A 051510	.00	3,000.00	.00	112.20	2,887.80	S14
MASS WATER RESOURCES COMM-MCCANN	A 051511	.00	3,000.00	.00	398.00	2,602.00	S14
CHARLES E MERRILL	A 051650	22,433.47	.00	.00	2,969.71	19,463.76	J13
GS 3268	A 052201	.00	5,000.00	372.50CR	846.60	3,780.90	J12
NEW ENGLAND AQUARIUM-SEARS/AMHERST	A 052280	.00	.00	2,192.22	2,192.22	.00	S18
NATURAL RESOURCES	A 052300	1,290.39	1,148.29	.00	1,689.64	749.04	K11
N E DISTRIBUTIVE EDUCATION	A 052305	828.00	7,310.00	.00	8,138.00	.00	Q11
N E REGIONAL COMMISSION	A 052306	8,540.00	.00	.00	8,090.55	449.45	K11
NEW ENGLAND COMMISSION ZAHRADNIK	A 052307	.00	8,000.00	161.33	8,161.33	.00	K04
N. E. RESEARCH INC	A 052310	.00	5,805.81	2,935.85	8,482.27	259.39	J34

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS CONTINUED

ACCOUNT NAME	ACCOUNT CODE CONTINUED	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
N Y FLORISTS CLUB	A 052400	2.74	.00	.00	.00	2.74	K73
STATE OF NEW YORK-JOHNSON	A 052410	.00	75,012.89	19,590.00	53,153.89	41,449.00	Q11
N E B HIGHER EDUCATION	A 052502	717.61	.00	656.34CR	61.27	.00	J24
PROJ OF COUNTY POP MASS THROUGH 1983	A 052503	900.00	.00	.00	900.00	.00	J24
PLANNED PARENTHOOD LEAGUE MASS	A 052901	77.38	.00	.00	77.25	.13	W11
PITTSFIELD ANTI-TUBERCULOSIS	A 052903	.00	11,669.25	.00	5,746.73	5,922.52	J32
POPULATION COUNCIL	A 053002	.00	9,600.00	710.00CR	934.14	7,955.86	K15
PRF AMERICAN CHEMICAL	A 053100	1,960.19	.00	3,880.00	5,714.95	125.24	J34
PETROLEUM RES FD 500 A4	A 053300	4,476.12	.00	.00	3,489.98	986.14	J34
PETROLEUM RES FD 575 A5	A 053500	2,320.80	8,000.00	1,334.00CR	3,832.98	5,153.82	J34
PETROLEUM RES FD 598 A2	A 053700	9.04	.00	.00	9.04	.00	J34
PETROLEUM RES FD 973 A4	A 054100	111.09	.00	.00	6.25	104.84	J34
PETROLEUM RES FD 1637 A1	A 054300	139.24	.00	.00	139.24	.00	J34
PRF 2055-G3-AMHERST	A 054352	.00	4,000.00	.00	1,366.98	2,633.02	J34
PRF 2121 G1-AMHERST	A 054360	.00	7,500.00	.00	2,325.51	5,174.49	J34
PETROLEUM RES FD 2865 A5	A 054400	2,888.07	.00	26.34CR	2,854.13	7.60	J34
PETROLEUM RES FD 2179 A1,4	A 054800	7,360.18	.00	.00	4,847.50	2,512.68	J34
PETROLEUM RES FD 2914 A5	A 054802	57.63	.00	.00	.00	57.63	J34
PETROLEUM RES FD 3357 A1,3	A 054803	7,920.96	5,568.00	928.00CR	6,894.52	5,666.44	J34
PETROLEUM RES FD 3551 A1,4	A 054804	3,120.86	7,560.00	1,260.00CR	7,963.58	1,457.28	J34
PETROLEUM RES FD 3556 A3	A 054810	1,925.28	7,500.00	1,250.00CR	6,306.62	1,868.66	J34
PETROLEUM RES FD 3398 A6	A 054811	2,685.42	.00	.00	2,685.42	.00	M12
PETROLEUM RES FD. 4362 AC5	A 054812	5,733.26	7,160.00	1,318.39CR	5,189.83	6,385.04	S17
PRF 4943 AC-3.4 AMHERST	A 054815	.00	12,670.00	1,679.33CR	6,663.21	4,327.46	J34
PRF 5129 AC1 AMHERST	A 054816	.00	9,600.00	1,600.00CR	2,512.38	5,487.62	J34
RESEARCH FOUNDATION N Y FUND	A 055610	300.00	300.00	.00	195.53	404.47	K13
RESEARCH SERVICE AGRICULTURE	A 055700	4,812.01	.00	.00	348.83	4,463.18	K01
RESOURCES FOR THE FUTURE	A 055800	3,150.19	.00	30.39CR	3,119.80	.00	K03
ROCKFELLER FOUNDATION 67054	A 056101	.00	.00	.00	.00	.00	J14
ROCKFELLER FOUNDATION NES 7106	A 056102	.00	5,300.00	.00	5,000.00	300.00	K11
FORD FOUNDATION 700-0143	A 056105	24,833.87	8,278.00	57.94CR	33,053.93	.00	Q11
FORD FOUNDATION TRUST FUND/AMHERST	A 056106	.00	178,380.00	1,183.01CR	154,977.05	22,219.94	Q11
SALMONELLA GHS FUND	A 056400	7,927.27	.00	.00	183.77	7,743.50	K15
SCOTTISH RITE SCHIZOPHRENIA	A 056410	.00	8,500.00	.00	4,708.13	3,791.87	J21
SHELL CRANBERRY	A 057200	332.24	.00	.00	24.88	307.36	K60
A.P. SLOAN BR 973-2	A 057401	5,619.29	.00	.00	4,811.11	808.18	J38
ALFRED P SLOAN BR993	A 057403	3,414.99	.00	.00	483.39	2,931.60	J34
ALFRED P SLOAN BR1191	A 057404	8,660.83	.00	57.94CR	6,438.25	2,164.64	J34
ALFRED P SLOAN BR1192	A 057405	48.70	.00	.00	48.70	.00	J34
STEARNS	A 057800	536.35	1,000.00	.00	725.19	811.16	K12
UNION FOR EXPERIMENTING COLLEGES	A 058190	.00	11,530.00	740.00CR	4,071.44	6,718.56	Q11

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS CONTINUED

A C C O U N T N A M E	ACCOUNT CODE CONTINUED	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
U OF STATE OF NEW YORK	A 058202	1,896.90	.00	.00	1,543.94	352.96	Q11
TITLE 1 CONSORTIUM	A 058205	1,762.50	.00	.00	668.00	1,094.50	J17
U/CONN. NO. 5171-0102-090-S7	A 058206	1,428.00CR	42,200.00	388.77CR	16,010.40	24,372.83	K03
UNIV OF BRIDGEPORT	A 058208	.00	.00	.00	.00	.00	F26
WHITEHALL	A 058600	436.73	.00	.00	434.47	2.26	K15
WILDLIFE MANAGEMENT	A 058700	756.93	1,571.78	.00	1,956.50	372.21	K11
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS		233,671.11	1,062,284.67	35,177.48	881,797.65	449,335.61	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 16 FEDERAL GRANTS AND CONTRACTS TRAINING

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
16/01 NATIONAL INSTITUTE HEALTH							
HD 00204-02	A 070202	.00	.00	166.61CR	166.61CR	.00	J22
HD-00204-03	A 070203	.00	.00	2,950.56	2,950.56	.00	K15
NIH HD 00204-04	A 070204	.00	.00	37,220.02	37,220.02	.00	K15
AH 01001-01	A 070306	.00	608.00	5,389.30	5,997.30	.00	WW1
AH 00057-01	A 070311	.00	.00	.00	.00	.00	WW1
RSA 442-T-71	A 070501	.00	.00	9,532.35	9,532.35	.00	J25
AHI-69-589-C-A	A 070605	.00	.00	1,388.86	1,388.86	.00	WW1
AHI-69-589-C-B	A 070606	.00	.00	1,254.81	1,254.81	.00	N13
NIH AHI 70-589 (D) A	A 070607	.00	.00	37,618.89	37,618.89	.00	WW1
NIH AHI 70-589 (D) B	A 070608	.00	78.13	11,256.03	11,334.16	.00	N13
AH 00589-05	A 070609	.00	.00	4,450.01	4,450.01	.00	WW1
AH 00589-05-B	A 070610	.00	.00	2,284.56	2,284.56	.00	N13
NIH 3 A11 NU 00131-0151	A 070702	.00	155.00	9,437.24	9,592.24	.00	O11
AA-4-70-086-02	A 070703	.00	.00	9,314.49	9,314.49	.00	T15
NU 00131-02	A 070704	.00	360.00	20,028.77	20,388.77	.00	O11
NPG 367-01	A 070901	.00	.00	.00	.00	.00	O11
NU-00367-02	A 070903	.00	.00	15,512.89	15,512.89	.00	O11
NU 00367-03	A 070904	.00	50.32	8,231.93	8,282.25	.00	O11
AH00654-05	A 071005	.00	.00	.00	.00	.00	WW1
AH00655-04	A 071104	.00	.00	.00	.00	.00	M13
MH-06244-15	A 072707	.00	35.24	8,110.86	8,146.10	.00	J21
NIH MH 06244-16	A 072708	.00	69.41	73,894.13	73,963.54	.00	J21
MH 06244-17	A 072709	.00	.00	.00	.00	.00	J21
MH-06400-14	A 072907	.00	.00	2,041.38	2,041.38	.00	O11
NIH-MH 06400-15	A 072908	.00	.00	22,151.96	22,151.96	.00	O11
MH 06400-16	A 072909	.00	.00	.00	.00	.00	O11
MH-11823-01-A1	A 073301	.00	31.25	3,883.95	3,915.20	.00	J21
NIH MH 11823-02	A 073302	.00	237.05	30,848.14	31,085.19	.00	J21
MH 11823-03	A 073303	.00	.00	.00	.00	.00	J21
MH 12537-01	A 073401	.00	.00	.00	.00	.00	O11
PHT-7-43-C-69	A 074403	.00	.00	2,369.65	2,369.65	.00	M13
NIH AH 00743-04	A 074404	.00	.00	14,327.30	14,327.30	.00	M13
AH 00743-05	A 074405	.00	.00	.00	.00	.00	M13
AP-00069-01	A 075201	.00	.00	30,092.88	30,092.88	.00	M13
AP-00069-02 AMHERST	A 075202	.00	.00	34,233.05	34,233.05	.00	M13
AI-00226-08	A 075907	.00	.00	2,474.65	2,474.65	.00	J39
NIH AI 00226-09	A 075908	.00	.00	44,092.68	44,092.68	.00	J39
AI 00226-10	A 075910	.00	.00	.00	.00	.00	J39
GM 02168-01	A 077601	.00	.00	.00	.00	.00	J32
GM-08494-05	A 081205	.00	.00	3,428.03	3,428.03	.00	J32

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 16 FEDERAL GRANTS AND CONTRACTS TRAINING CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
16/01							
16/01 NATIONAL INSTITUTE HEALTH	TOTALS	.00	1,624.40	447,652.76	449,277.16	.00	
16/02 NATIONAL SCIENCE FOUNDATION							
GZ-1220	A 085904	2,482.90	.00	10,511.59	12,994.49	.00	S11
GZ-1510	A 086200	3,313.78	1,511.00	7,898.92	12,723.70	.00	M13
NSF GZ 1620	A 086404	3,560.00	152.94	69,069.72	72,782.66	.00	S11
GZ 1920	A 086801	.00	.00	13,543.47	13,543.47	.00	J37
GZ 2027	A 086803	.00	.00	2,295.00	2,295.00	.00	S11
GW-3681	A 087610	508.34	.00	508.34CR	.00	.00	S12
GW-4072	A 087807	2,543.04	.00	2,528.78CR	14.26	.00	K09
GW-4086	A 087808	1,965.51	.00	1,945.81CR	19.70	.00	Q11
GW-5135	A 088010	349.80CR	135.00	13,215.90	13,001.10	.00	Q11
GY-5825	A 088201	1,759.73	600.00	470.85	2,830.58	.00	M14
GY-6011	A 088213	845.05	.00	425.05CR	420.00	.00	J38
GY-7245	A 088319	5,631.85	.00	1,447.30	7,079.15	.00	J38
GY-7297	A 088335	6,729.92	.00	4,888.75	11,618.67	.00	J39
GY 8343 AMHERST	A 088516	.00	.00	23,423.84	23,423.84	.00	S17
GY 8481 AMHERST	A 088521	.00	.00	3,149.51	3,149.51	.00	J39
G4Y8966	A 089291	.00	.00	897.86	897.86	.00	J38
G B 19643	A 091000	.00	.00	3,000.00	3,000.00	.00	S11
16/02 NATIONAL SCIENCE FOUNDATION	TOTALS	28,990.32	2,398.94	148,404.73	179,793.99	.00	
16/03 OTHER AGENCIES							
DAHC-20-69-C-0-0240	A 063505	15.03	19,385.45	19,133.48CR	267.00	.00	K01
DAHC 20-70-C-0323	A 063506	655.35	34,629.23	5,887.23CR	29,391.28	6.07	K01
DC-EDA-99-6-09167	A 064302	.00	.00	.00	.00	.00	L11
NASA-NSG-T-137	A 066200	1,867.55	.00	2,400.54	4,268.09	.00	S11
OCD-PS-65-87	A 068002	3,130.23	1,199.46	4,329.69CR	.00	.00	K01
PC-51-930	A 068500	800.00CR	5,196.94	4,396.94CR	.00	.00	K01
P.C. 42-0916	A 068501	112.41	.00	228.47	340.88	.00	K01
PC 42-2008/AMHERST	A 068511	.00	.00	5,000.00	4,666.06	333.94	K01
MESPU WEST VIRGINIA	A 069215	127.82	.00	59.80CR	68.02	.00	Q11
SPA-442-T-70	A 069306	.00	235.25	1,653.70	1,888.95	.00	J25
16/03 OTHER AGENCIES	TOTALS	5,108.39	60,646.33	24,524.43CR	40,890.28	340.01	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 16 FEDERAL GRANTS AND CONTRACTS TRAINING CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
16/04 OFFICE OF EDUCATION							
OEG-1-8-061877-0006-058	A 068208	8,057.57CR	8,057.57	.00	.00	.00	Q11
OEG-0-9-059051-3803-721	A 068213	.00	.00	.00	.00	.00	Q11
OEG-0-9-059053-3805-721	A 068214	.00	.00	.00	.00	.00	Q11
OEG-0-9-311877-4430-010	A 068215	46,931.77CR	54,805.40	.00	7,873.63	.00	Q11
OEG-0-9-311303-4551-031	A 068216	11,545.56	.00	185.82	11,731.38	.00	H11
OEG 0-70-3965	A 068223	.00	55,160.00	21,250.00CR	24,970.26	8,939.74	Q11
OEG-0-70-4918	A 068224	.00	100,000.00	6,858.62CR	91,629.44	1,511.94	A81
OEG-0-70-4821	A 068225	.00	42,849.89	2,101.21CR	26,019.40	14,729.28	H11
OEG 0-70-4409 (725) AMHERST	A 068226	.00	70.22	46,968.85	47,039.07	.00	Q11
OEO-0-71-0150-(715) AMHERST	A 068227	.00	6,480.00	480.00CR	4,184.61	1,815.39	Q11
OEG 0-71-1060 (725)	A 068229	.00	.00	6,897.88	6,897.88	.00	Q11
OEG 0-71-3484-(520)	A 068230	.00	.00	.00	.00	.00	Q11
OEG 0-71-0548 (715)	A 068310	.00	101,537.00	.00	8,951.33	92,585.67	Q11
OE-H-9932 AMHERST	A 069101	.00	222,072.00	15,216.77CR	197,954.12	8,901.11	Q11
OEG-0-9-311359-2147-725	A 069211	2.11	.00	3,873.79	3,875.90	.00	Q11
OEG-0-9-311694-2175-722	A 069212	.00	.00	32,422.43	32,422.43	.00	Q11
OEG-0-9-316008-2455-725	A 069213	.00	1,992.71	168,318.71	170,266.18	45.24	Q11
OEG 0-70-3828	A 069217	1,758.00CR	151,607.95	5,466.73CR	136,304.23	8,078.99	E20
OEG 0-71-3073 (453)	A 069219	.00	.00	1,879.92	1,879.92	.00	E20
OEG 0-71-2622	A 069220	.00	.00	730.00	730.00	.00	C46
OEG 0-71-1090 (725)	A 069223	.00	.00	.00	.00	.00	Q11
16/04 OFFICE OF EDUCATION	TOTALS	45,199.67CR	744,632.74	209,904.07	772,729.78	136,607.36	
16/05 ARMY							
DAHC 20-71-C-0235/AMHERST	A 063510	.00	13,781.92	13,718.08	27,028.15	471.85	K01
WP-00012-01	A 065203	6,650.24	.00	.00	5,723.86	926.38	K13
WP-00077-05	A 065810	19,572.17	.00	18,691.34CR	880.83	.00	M13
USDI IT2-WP-267-01	A 065851	.00	34,882.45	17,581.49	26,652.50	25,811.44	M13
DI EPA 5PA WP 267-02	A 065852	.00	.00	.00	.00	.00	M13
WP-00077-04	A 074804	1,085.55	.00	1,085.55CR	.00	.00	M13
16/05 ARMY	TOTALS	27,307.96	48,664.37	11,522.68	60,285.34	27,209.67	
SECT-16 FEDERAL GRANTS AND CONTRACTS TRAINING		16,207.00	857,966.78	792,959.81	1,502,976.55	164,157.04	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 17 FEDERAL GRANTS AND CONTRACTS-FACILITIES

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
NIH RC-461	A 065900	6,611.00	.00	.00	.00	6,611.00	X00
NIH RC-764	A 066100	8,965.00	.00	.00	.00	8,965.00	X00
SECT-17 FEDERAL GRANTS AND CONTRACTS-FACILITIES		15,576.00	.00	.00	.00	15,576.00	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 18 FEDERAL GRANTS AND CONTRACTS EQUIPMENT

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
18/01 NATIONAL INSTITUTE OF HEALTH							
RH-00607-01	A 070103	.00	.00	25,000.00	25,000.00	.00	K10
18/01 NATIONAL INSTITUTE OF HEALTH	TOTALS	.00	.00	25,000.00	25,000.00	.00	
18/02 NATIONAL SCIENCE FOUNDATION							
GZ-705	A 085402	.00	.00	2,886.26	2,886.26	.00	S17
GY 4956	A 087907	.00	.00	.00	.00	.00	M15
GY-4957	A 087908	.00	.00	784.76	784.76	.00	M15
GY-6207	A 088220	.00	.00	32.89	32.89	.00	M14
GY 6612	A 088304	.00	.00	9,285.65	9,285.65	.00	M15
NSF GY 7765	A 088425	.00	.00	5,685.50	5,685.50	.00	M14
NSF GY 7788	A 088427	.00	.00	10,021.37	10,021.37	.00	M15
NSF G4 8059	A 088502	.00	.00	24,960.05	24,960.05	.00	J34
GP-10240	A 089770	.00	.00	15,300.00	15,300.00	.00	J34
GK-11379	A 089901	.00	.00	26,798.21	26,798.21	.00	M14
NSF GP 18387	A 090064	.00	.00	.00	.00	.00	J34
GP 28238	A 091711	.00	.00	762.00	762.00	.00	S17
GK 29196	A 091713	.00	.00	.00	.00	.00	M15
GK 29407	A 091719	.00	.00	.00	.00	.00	S17
18/02 NATIONAL SCIENCE FOUNDATION	TOTALS	.00	.00	96,516.69	96,516.69	.00	
18/03 OTHER AGENCIES							
DA ARO-D-31-124-G752	A 064002	3,066.92	.00	.00	2,410.00	656.92	J38
18/03 OTHER AGENCIES	TOTALS	3,066.92	.00	.00	2,410.00	656.92	
18/04 OFFICE OF EDUCATION							
OEG 0-0-310001-0036-339	A 068217	11,769.00CR	.00	11,769.00	.00	.00	AA6
OEG 0-9-310080-0791-314	A 068507	3.53	.00	.08CR	3.45	.00	G11
OEG 0-70-5821 (314)	A 068509	.00	26,189.00	.00	26,188.43	.57	G11
18/04 OFFICE OF EDUCATION	TOTALS	11,765.47CR	26,189.00	11,768.92	26,191.88	.57	
SECT-18 FEDERAL GRANTS AND CONTRACTS EQUIPMENT		8,698.55CR	26,189.00	133,285.61	150,118.57	657.49	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 19 FEDERAL GRANTS CONTRACTS OTHER PURPOSES

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
MASS REHABILITATION SPEECH	A 060301	.00	1,176.08	4.88CR	1,171.20	.00	J25
AID AFR 437	A 060900	15,965.75	67,190.26	7,704.43CR	41,722.86	33,728.72	K01
AID AFR 281 U	A 061300	22,605.86	390,541.83	84,859.71CR	325,547.95	2,740.03	Q11
OE 72-002221 B	A 061906	.00	.00	1,327.70	1,327.70	.00	Q11
OE 77-002221 FY70	A 061907	.00	1,026.50	1,026.50CR	.00	.00	F24
OE 77-002221 FY71 EOI	A 061910	.00	14,473.45	332,436.05	346,909.50	.00	F24
OE 77-002221 FY71 EOF	A 061920	.00	9,525.40	127,349.60	136,875.00	.00	F24
OE 77 002221 FY71 EOS	A 061930	.00	4,124.00	87,176.00	91,300.00	.00	F24
OE 77-002221 FY71 EOT	A 061940	.00	175.00	42,650.00	42,825.00	.00	F24
DA ARO D 162	A 063604	.00	6,284.86	6,284.86CR	.00	.00	M11
USDC OSTS-11-20	A 065901	662.76	.00	.00	.00	662.76	M11
DC OSTS-12-20-6800	A 065902	312.13	.00	312.13CR	.00	.00	M11
DC OSTS 12 20 6801	A 065903	17.44CR	.00	17.44	.00	.00	M11
DC OSTS 12 20 6803	A 065904	94.69CR	.00	94.69	.00	.00	M11
DC OSTS 12 20 6804	A 065905	.00	.00	.00	.00	.00	M11
DC OSTS 12 20 6805	A 065906	.00	.00	.00	.00	.00	M11
DC OSTS 12 20 6807	A 065907	.00	.00	.00	.00	.00	M11
DC OSTS 12 20 6817	A 065908	200.00CR	.00	200.00	.00	.00	M11
DC OSTS 12 20 6819	A 065909	.00	.00	.00	.00	.00	M11
DC OSTS 12 20 6821	A 065910	.00	.00	.00	.00	.00	M11
DC OSTS 12 20 6814	A 065911	.00	.00	.00	.00	.00	M11
DC OSTS 69-12-20-69100	A 065915	20,250.64	103,568.42	123,819.06CR	.00	.00	M11
DC OSTS 69 12 20 69101	A 065916	577.81CR	82.87	4,579.90	4,084.96	.00	M11
DC OSTS 69 12 20 69102	A 065917	6,622.69CR	.00	23,214.37	16,591.68	.00	M11
DC OSTS 69 12 20 69103	A 065918	9,068.60CR	.00	21,714.84	12,646.24	.00	M11
DC OSTS 69 12 20 69104	A 065919	.00	.00	.00	.00	.00	M11
DC OSTS 69 12 20 69105	A 065920	15,137.49CR	.00	20,996.68	5,859.19	.00	M11
DC OSTS 69 12 20 69106	A 065921	5,923.68CR	210.00	23,123.03	17,409.35	.00	K13
DC OSTS 69 12 20 69107 A	A 065922	1,130.85CR	.00	3,115.59	1,984.74	.00	K04
DC OSTS 69-12-20-69201	A 065923	1,944.80CR	.00	2,674.85	730.05	.00	M11
DC OSTS 69 12 20 69202	A 065924	.00	.00	4,132.02	4,132.02	.00	M11
DC OSTS 69 12 20 69203	A 065925	.00	.00	804.53	804.53	.00	M11
DC OSTS 69 12 20 69204 A	A 065926	.00	629.42	.00	.00	629.42	M11
DC OSTS 69 12 20	A 065927	.00	.00	18,167.51	18,167.51	.00	M11
DC OSTS 69 12 20 69107 B	A 065928	437.10CR	.00	698.03	260.93	.00	M11
DC OSTS 69 12 20 69204 B	A 065929	.00	.00	.00	.00	.00	M11
DC OSTS 69-12-55-69108/AMHERST	A 065930	.00	3,272.09	12.90	3,284.99	.00	M11
DC BIC P O 1-20155	A 065950	.00	.00	.00	.00	.00	L15
OEC 0-70-4232 (508)	A 068308	1,157.05	128,878.72	28,046.76	157,484.01	598.52	Q11
HEADSTART 1221-136	A 069400	21.00	.00	21.00CR	.00	.00	Q11
OEO UB AMHERST 68-69	A 069603	.00	.00	.00	.00	.00	Q11

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 19 FEDERAL GRANTS CONTRACTS OTHER PURPOSES CONTINUED

ACCOUNT NAME	ACCOUNT CODE CONTINUED	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
UB AMHERST DO 69-70	A 069604	1,336.76	76.00	3,185.22	4,597.98	.00	Q11
OEO CG-8834	A 069903	.00	.00	.00	.00	.00	T11
OEG CG-8834 BO 68-69	A 069905	3,758.95CR	.00	3,758.95	.00	.00	T11
OEO CG-8834 CO 69-70	A 069906	30,534.36	30,268.13	3,123.58CR	57,678.91	.00	T11
OEO CG-9932 AO 69-70	A 069970	29,665.96	.00	7,083.17CR	22,582.79	.00	Q11
SECT-19 FEDERAL GRANTS CONTRACTS OTHER PURPOSES		77,598.17	761,503.03	515,237.34	1,315,979.09	38,359.45	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
NATIONAL SCIENCE FOUNDATION							
GK 23087	A 091510	.00	.00	264.00	264.00	.00	M12
GP 29444	A 091723	.00	.00	.00	.00	.00	J39
20/01 NATIONAL INSTITUTE HEALTH							
PHS 86-67-175	A 070402	381.93	.00	381.93CR	.00	.00	J13
PH 22-68-39	A 070403	1,062.93	10,785.53	8,132.26CR	3,716.20	.00	K73
69-2132	A 070405	356.25	15,789.84	3,039.84CR	13,041.94	64.31	K15
69-2151	A 070406	329.54	7,867.33	7,865.93CR	330.94	.00	J24
NIH HEW OS-70-154	A 070407	500.00	24,448.12	4,959.78CR	18,512.42	1,475.92	Q11
CPA 70-127	A 070408	.00	18,201.27	3,743.09	21,943.26	1.10	K73
NIH 71-2029/AMHERST	A 070409	.00	.00	2,700.00	2,692.24	7.76	J24
FR-07048-04	A 070803	.00	.00	992.79	992.79	.00	S11
NIH FR 07048-05	A 070804	.00	.00	64,528.60	64,528.60	.00	S11
RR 07048-06	A 070805	.00	.00	1,673.99	1,673.99	.00	S11
MH 01293-14	A 071907	.00	104.00	19,423.91	19,527.91	.00	J21
MH-01293-15/AMHERST	A 071908	.00	237.50	26,301.37	26,538.87	.00	J21
MH 03803-09	A 072306	.00	534.68	4,624.58	5,158.76	.50	J21
HD-03948-01	A 072401	.00	.00	2,829.10	2,829.10	.00	J21
HD 04924-09	A 072509	.00	.00	18,352.61	18,352.61	.00	J39
HD 04924-10/AMHERST	A 072510	.00	.00	18,150.24	18,150.24	.00	J39
HD 04189-02	A 072602	.00	.00	6,675.07	6,675.07	.00	K15
HD 04189-03 AMHERST	A 072603	.00	.00	5,867.78	5,867.78	.00	K15
HD 04319-01	A 072801	.00	.00	379.96	379.96	.00	J21
NIH HD 04319-02	A 072802	.00	6.50	7,471.45	7,477.95	.00	J21
HD 05325-01	A 073201	.00	147.40	43,291.80	43,439.20	.00	WW1
HD 05724-01	A 073211	.00	.00	2,656.06	2,656.06	.00	J22
MH 16472-01	A 073801	.00	.00	1,491.45	1,491.45	.00	J21
NIH MH 16472-02	A 073802	.00	1.10	12,091.30	12,092.40	.00	J21
MH 17268-01	A 073901	.00	.00	453.16	453.16	.00	WW1
MH 17345-01	A 074001	.00	.00	.00	.00	.00	J27
MH 18107-01	A 074101	.00	.00	816.90	816.90	.00	J21
NIH-MH-17997-01	A 074111	.00	.00	4,551.89	4,551.89	.00	J21
MH 17395-01	A 074201	.00	.00	6,020.44	6,020.44	.00	J21
NIH MH 17395-02/AMHERST	A 074202	.00	.00	10,305.69	10,305.69	.00	J21
MH 18182-01	A 074503	.00	.00	2,910.56	2,910.56	.00	J21
MH 18575-01	A 074611	.00	.00	4,648.01	4,648.01	.00	J21
NIH MH 18661-01	A 074621	.00	.00	3,328.29	3,328.29	.00	J21
NIH MH-18805-01	A 074631	.00	.00	4,205.00	4,205.00	.00	J27
NIH MH 19417-01/AMHERST	A 074641	.00	11.00	6,328.96	6,339.96	.00	J21
CC-00049-07	A 074707	.00	.00	1,209.05	1,209.05	.00	K15
UI 00092-08	A 075306	.00	.00	3,649.16	3,649.16	.00	K10

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/01 NATIONAL INSTITUTE HEALTH	CONTINUED						
CC-00267-03A	A 075403	.00	.00	5.55	5.55	.00	K57
CC-00267-03B	A 075404	.00	.00	39.14	39.14	.00	K60
AP-00791-02	A 075602	.00	.00	12,404.67	12,404.67	.00	M12
AP-00791-03	A 075603	.00	.00	11,327.81	11,327.81	.00	M12
NIH FD-00282-01	A 076104	.00	.00	13,370.12	13,370.12	.00	K09
FD 00282-02	A 076105	.00	.00	312.21	312.21	.00	K09
CC-00354-01	A 076201	.00	.00	7,677.67	7,677.67	.00	K60
FD 00268-02/AMHERST	A 076202	.00	.00	7,345.83	7,345.83	.00	K60
UI 00145-06	A 076706	.00	.00	34.00CR	34.00CR	.00	K10
FD-0053-06	A 076907	.00	.00	8,569.89	8,569.89	.00	K10
FD 00053-07/AMHERST	A 076908	.00	.00	6,152.92	6,152.92	.00	K10
UI 00159-05	A 077005	.00	.00	2,006.50	2,006.50	.00	K15
NIH FD 00087-06	A 077006	.00	.00	7,949.27	7,949.27	.00	K15
AI-00742-15	A 077106	.00	.00	1,304.73	1,304.73	.00	J39
NIH MH AI 00742-16	A 077107	.00	303.50	35,202.57	35,506.07	.00	J39
AI 00742-17	A 077108	.00	.00	2,433.32	2,433.32	.00	J39
NIH FD 00153-05	A 077204	.00	.00	9,994.99	9,994.99	.00	K10
FD 00153-06	A 077205	.00	.00	901.60	901.60	.00	K10
AM-01266-14	A 077307	.00	.00	9,628.53	9,628.53	.00	J39
AM 01266-15/AMHERST	A 077308	.00	.00	6,345.94	6,345.94	.00	J39
AP 01301-01	A 077501	.00	.00	4,758.21	4,758.21	.00	M14
AP 01376-01	A 077701	.00	.00	.00	.00	.00	K73
AP 01443-01	A 077801	.00	.00	.00	.00	.00	M12
AI 05440-06	A 078906	.00	.00	.00	.00	.00	J32
AI-05440-07	A 078907	.00	.00	10,300.53	10,300.53	.00	J32
AI-05440-08/AMHERST	A 078908	.00	.00	9,557.89	9,557.89	.00	J32
NB 07833-01	A 079201	.00	.00	7,385.03	7,385.03	.00	P12
NB 8119-12	A 079307	.00	.00	12,603.43	12,603.43	.00	J39
NS 08119-13	A 079308	.00	.00	20,960.77	20,960.77	.00	J39
NB 08306-01-A1	A 079401	.00	.00	12.00	12.00	.00	M15
NIH NS 08306-02	A 079402	.00	.00	15,425.02	15,425.02	.00	M15
NS-08306-03	A 079403	.00	.00	2,972.74	2,972.74	.00	M15
AI-06153-06	A 079506	.00	.00	812.35	812.35	.00	J39
AI 06153-07	A 079507	.00	240.00	17,315.69	17,555.69	.00	J39
AI 06153-08	A 079508	.00	.00	2,879.41	2,879.41	.00	J39
CA-06620-08	A 080507	.00	.00	5,040.56	5,040.56	.00	J34
AI-06735-05	A 080605	.00	.00	828.64	828.64	.00	J32
NIH AI 06735-06	A 080606	.00	.00	21,215.09	21,215.09	.00	J32
AI-06848-04	A 080803	.00	.00	490.56	490.56	.00	J32
NIH AI 06848-05	A 080804	.00	.00	10,693.12	10,693.12	.00	J32
AI 06848-06	A 080805	.00	.00	2,031.34	2,031.34	.00	J32

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/01 NATIONAL INSTITUTE HEALTH	CONTINUED						
AI-07654-03	A 081003	.00	.00	419.43	419.43	.00	J32
AI-07654-04	A 081004	.00	681.64	14,568.30	15,249.94	.00	J32
AI-08248-02	A 081102	.00	.00	341.63	341.63	.00	J32
AI-08248-03	A 081103	.00	8.50	6,321.30	6,329.80	.00	J32
AI 08248-04/AMHERST	A 081104	.00	.00	5,934.73	5,934.73	.00	J32
AI-08396-02	A 081202	.00	.00	.00	.00	.00	K13
AI 08396-03	A 081203	.00	135.90	15,891.10	16,027.00	.00	K13
AI 08396-04	A 081204	.00	.00	1,508.69	1,508.69	.00	K13
AI-08491-02	A 081402	.00	.00	24,235.92	24,235.92	.00	J39
AI 08491-03/AMHERST	A 081403	.00	.00	24,844.50	24,844.50	.00	J39
AI 08791-03	A 081603	.00	.00	540.36	540.36	.00	I52
NS 08869-01	A 081611	.00	.00	23,514.99	23,514.99	.00	J39
NS 08869-02/AMHERST	A 081612	.00	.00	11,939.34	11,939.34	.00	J39
GM-09706-06	A 081705	.00	.00	3,756.61	3,756.61	.00	J34
GM 09706-07	A 081706	.00	.00	11,864.96	11,864.96	.00	J34
NS-09755-01 AMHERST	A 081721	.00	.00	10,258.05	10,258.05	.00	S12
NS 09755-02	A 081722	.00	.00	1,144.00	1,144.00	.00	S12
HE 11342-03	A 081803	.00	13.29	5,403.68	5,416.97	.00	S17
NIH AM 12163-03	A 081904	.00	.00	12,562.89	12,562.89	.00	J32
AM 12163-04	A 081905	.00	.00	1,202.94	1,202.94	.00	J32
AM-11157-03	A 082003	.00	.00	369.60	369.60	.00	J22
NIH AM 11157-04	A 082004	.00	510.96	15,076.63	15,587.59	.00	J22
AM 11157-05	A 082005	.00	.00	1,422.90	1,422.90	.00	J22
GM-11071-07	A 082106	.00	.00	7,165.75	7,165.75	.00	J34
NIH GM 11071-08	A 082107	.00	12.93	29,916.73	29,929.66	.00	J34
GM 11071-09	A 082108	.00	.00	5,000.83	5,000.83	.00	J34
GM-12064-06	A 082205	.00	.00	148.29	148.29	.00	K10
GM 12064-07	A 082206	.00	.00	12,336.77	12,336.77	.00	K10
HE 12527-01	A 082301	.00	.00	567.20	567.20	.00	J34
NIH HE 12527-02	A 082302	.00	.00	9,683.37	9,683.37	.00	J34
HE 12527-03	A 082303	.00	.00	4,555.15	4,555.15	.00	J34
HE 13188-01	A 082411	.00	20.66	9,610.35	9,631.01	.00	S17
HE 13188-02 AMHERST	A 082412	.00	.00	11,732.97	11,732.97	.00	S17
HE 14523-01	A 082631	.00	.00	460.37	460.37	.00	I54
GM-14634-03	A 082703	.00	.00	237.17	237.17	.00	J32
AM 14779-01	A 082711	.00	.00	2,076.12	2,076.12	.00	J34
GM-14945-04	A 082804	.00	.00	3,351.73	3,351.73	.00	J22
GM 14945-05	A 082805	.00	.00	15,319.82	15,319.82	.00	J22
GB 28188	A 091706	.00	.00	2,679.32	2,679.32	.00	J21

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/01							
20/01 NATIONAL INSTITUTE HEALTH	TOTALS	2,630.65	80,061.65	863,478.65	944,621.36	1,549.59	
20/02 NATIONAL SCIENCE FOUNDATION							
GJ 60	A 083701	.00	.00	5,713.00	5,713.00	.00	S12
GA 390	A 084800	.00	.00	2,236.83	2,236.83	.00	J36
GA 467	A 085103	.00	.00	1,739.15	1,739.15	.00	J36
GK 1110	A 085802	.00	.00	420.09	420.09	.00	M12
GK 1565	A 086304	.00	.00	2,307.55	2,307.55	.00	M14
GS 1700	A 086405	.00	.00	606.19	606.19	.00	J27
GS 1727	A 086406	.00	.00	.00	.00	.00	J21
NSF GZ 1759	A 086407	.00	496.99	6,193.24	6,690.23	.00	M13
GK 2065	A 086802	.00	.00	5,672.31	5,672.31	.00	S17
GS 2103	A 086804	.00	.00	9,961.80	9,961.80	.00	J21
GK 2230	A 086902	.00	.00	2,720.10	2,720.10	.00	M14
GS 2449	A 086931	.00	.00	10,642.47	10,642.47	.00	J12
GK 2606	A 087003	.00	.00	1,602.19	1,602.19	.00	M14
GS 2746	A 087004	.00	94.00	12,678.13	12,772.13	.00	J21
GK 2781	A 087103	.00	.00	4,672.71	4,672.71	.00	S17
GK 2801	A 087104	.00	.00	499.75	499.75	.00	M12
GK 2982	A 087205	.00	.00	3,826.22	3,826.22	.00	M12
GB 3591	A 087605	.00	.00	1,510.00	1,510.00	.00	J33
GB 3615	A 087606	.00	.00	2,296.90	2,296.90	.00	J33
GK 3651	A 087608	.00	.00	2,377.62	2,377.62	.00	M14
GB 3863	A 087703	.00	.00	.00	.00	.00	J33
GU 4041	A 087707	.00	.00	870.70	870.70	.00	J21
GB 4147	A 087708	.00	.00	.00	.00	.00	J34
GP 4283	A 087802	.00	.00	309.13	309.13	.00	J34
GK 4556	A 087806	.00	.00	19,624.14	19,624.14	.00	M12
GY 4709	A 087901	.00	.00	10,783.96	10,783.96	.00	M14
GK 4897	A 087909	.00	.00	2,244.34	2,244.34	.00	M15
GK 4945	A 087910	.00	.00	3,180.34	3,180.34	.00	M15
GB 5130	A 088007	.00	.00	82.79	82.79	.00	J33
GP 5372	A 088102	.00	.00	144.85	144.85	.00	J34
NSF GK 5569	A 088110	.00	.00	5,084.98	5,084.98	.00	M14
NSF GK 5215	A 088150	.00	.00	5,746.16	5,746.16	.00	M14
GK 5702	A 088160	.00	.00	6,461.09	6,461.09	.00	K04
GP 6189	A 088210	.00	.00	.85	.85	.00	J38
GB 6233	A 088215	.00	.00	1,025.71	1,025.71	.00	J39
GB 6570	A 088216	.00	.00	431.54	431.54	.00	K07
GB 6691	A 088306	.00	.00	811.44	811.44	.00	J33

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/02 NATIONAL SCIENCE FOUNDATION	CONTINUED						
GB 6847	A 088311	.00	.00	4,699.51	4,699.51	.00	J33
GB 7077	A 088317	.00	.00	.00	.00	.00	J33
GB 7225	A 088318	.00	.00	3,510.38	3,510.38	.00	J33
GB 7274	A 088330	.00	.00	2,419.95	2,419.95	.00	J33
GB 7456	A 088356	.00	.00	.00	.00	.00	J32
GP 7664	A 088422	.00	106.20	7,291.12	7,397.32	.0	J38
GP 7774	A 088423	.00	36.36	4,244.34	4,280.70	.00	J22
GP 7828	A 088426	.00	.00	1,791.74	1,791.74	.00	J38
GP 7897	A 088430	.00	.00	.00	.00	.00	J38
GB 7996	A 088503	.00	.00	1,817.97	1,817.97	.00	J33
GB 8022	A 088505	.00	.00	3,692.89	3,692.89	.00	J39
GB 8063	A 088506	.00	.00	7,798.42	7,798.42	.0	K11
GB 8068	A 088507	.00	3.00	4,096.90	4,099.90	.00	J33
GB 8080	A 088508	.00	.00	12,051.21	12,051.21	.00	S17
GP 8205	A 088509	.00	.00	6,028.98	6,028.98	.00	J33
GP 8374	A 088511	.00	1,642.27	11,547.61	13,189.88	.00	J34
GP 8412	A 088512	.00	6.40	1,774.90	1,781.30	.00	J34
GP 8418	A 088514	.00	.00	4,289.27	4,289.27	.00	J38
GP 8304	A 088515	.00	.00	3,231.21	3,231.21	.00	J34
GP 8465	A 088517	.00	.00	250.65	250.65	.00	J38
GP 8581	A 088518	.00	.00	4.75	4.75	.00	J34
GB 8450	A 088520	.00	.00	12,059.14	12,059.14	.00	J39
GB 8634	A 088800	.00	.00	5,974.95	5,974.95	.00	J21
GB 8721	A 088802	.00	.00	8,479.18	8,479.18	.00	J33
GP 8782	A 089050	.00	.00	210.46	210.46	.00	J37
GP 8929	A 089290	.00	.00	.00	.00	.00	J37
GP 8998	A 089310	.00	.00	2,229.66	2,229.66	.00	J34
GP 9005	A 089400	.00	.00	.00	.00	.00	J37
GP 9267	A 089601	.00	.00	3,960.46	3,960.46	.00	J34
GP 9287	A 089602	.00	.00	13,471.91	13,471.91	.00	J34
GP 9409	A 089610	.00	.00	15.79	15.79	.00	J38
GP 9469	A 089615	.00	8.00	1,549.34	1,557.34	.00	J38
GA 10102	A 089800	462.84	.00	2,041.21	2,504.05	.00	J33
GP 10694	A 089801	.00	.00	9,722.06	9,722.06	.00	J34
GP 10925	A 089803	.00	.00	13,345.46	13,345.46	.00	J38
GP 10152	A 089805	.00	.00	12,293.50	12,293.50	.00	J34
GB 11569	A 089902	.00	.00	15,292.99	15,292.99	.00	J39
GP 12171	A 089904	.00	4.30	15,434.85	15,439.15	.00	J34
GP 11580	A 089905	.00	.00	5,194.05	5,194.05	.00	J37
GP 11662	A 089906	.00	.00	2,432.14	2,432.14	.00	J37
GP 12875	A 089907	.00	.00	2,817.15	2,817.15	.00	J34

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/02 NATIONAL SCIENCE FOUNDATION	CONTINUED						
GK 13297	A 089908	.00	.00	21,760.50	21,760.50	.00	S17
GP 13375	A 089909	.00	.00	136.00	136.00	.00	J37
GB 13903	A 089910	.00	1,152.25	1,123.34	2,275.59	.00	J33
GP 13281	A 089911	.00	.00	509.34	509.34	.00	J37
GP 12090	A 089912	113.26CR	.00	2,285.74	2,172.48	.00	J37
GB 13806	A 089924	.00	1,965.94	9,587.80	11,553.74	.00	J33
GP 14440	A 089925	.00	.00	16,145.30	16,145.30	.00	S17
GB 13842	A 089926	.00	60.95	14,644.16	14,705.11	.00	J33
GP 14110	A 089927	.00	.00	8,799.90	8,799.90	.00	J34
NSF GP 14130	A 089928	.00	186.30	8,294.30	8,480.60	.00	J38
NSF GP 14606	A 089930	.00	.00	14,423.61	14,423.61	.00	J34
GP 14690	A 090000	.00	.00	21,925.15	21,925.15	.00	J38
GP 15260	A 090010	.00	.00	5,730.00	5,730.00	.00	J37
GP 15282	A 090020	.00	.00	39,401.50	39,401.50	.00	J38
GP 15857	A 090023	.00	.00	4,465.77	4,465.77	.00	J38
GP 15725	A 090024	.00	.00	3,628.72	3,628.72	.00	J38
GP 16024	A 090030	.00	.00	12,249.46	12,249.46	.00	J38
GP 16033	A 090050	.00	.00	13,567.81	13,567.81	.00	J38
GP 16359	A 090055	.00	.00	11,744.60	11,744.60	.00	J38
NSF GP 16377	A 090060	.00	.00	10,332.37	10,332.37	.00	J38
GK 16622	A 090062	.00	.00	8,683.19	8,683.19	.00	M12
GP 17905	A 090065	.00	66.47	32,871.45	32,937.92	.00	J38
GB 18429	A 090066	.00	.00	6,002.84	6,002.84	.00	J39
GK 18514/AMHERST	A 090067	.00	.00	4,578.13	4,578.13	.00	M15
GB 18639	A 090070	.00	.00	642.48	642.48	.00	J32
NSF GK 18894	A 090080	.00	.00	10,607.84	10,607.84	.00	M14
NSF GP 19854	A 091001	.00	.00	10,131.14	10,131.14	.00	J37
NSF GP 20118	A 091200	.00	.00	9,971.81	9,971.81	.00	J38
NSF GP 20275	A 091210	.00	.00	9,334.93	9,334.93	.00	J34
NSF GP 20367	A 091220	.00	.00	6,536.73	6,536.73	.00	J34
NSF GB 20491/AMHERST	A 091230	.00	.00	7,896.62	7,896.62	.00	J38
GP 20526 AMHERST	A 091231	.00	.00	10,779.40	10,779.40	.00	J34
NSF GP 20856	A 091400	.00	.00	7,002.80	7,002.80	.00	J37
NSF GP 20896	A 091402	.00	.00	11,143.20	11,143.20	.00	J38
GB 20952	A 091403	.00	.00	5,847.81	5,847.81	.00	J34
NSF GP 21085	A 091404	.00	.00	3,716.60	3,716.60	.00	J37
NSF GP 21185	A 091406	.00	.00	5,676.67	5,676.67	.00	J37
GB 21262/AMHERST	A 091407	.00	.00	3,660.07	3,660.07	.00	K10
NSF GP 21284	A 091408	.00	.00	15,706.03	15,706.03	.00	J38
NSF GP 22515	A 091499	.00	.00	6,254.18	6,254.18	.00	J37
NSF GP 22530	A 091500	.00	.00	13,782.88	13,782.88	.00	J34

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/02 NATIONAL SCIENCE FOUNDATION	CONTINUED						
GP 22742/AMHERST	A 091504	.00	.00	2,401.99	2,401.99	.00	J39
NSF GB 22626/AMHERST	A 091505	.00	.00	6,511.17	6,511.17	.00	K16
GK 22837- AMHERST	A 091506	.00	.00	4,073.93	4,073.93	.00	S17
GP 22954 / AMHERST	A 091507	.00	.00	14,746.69	14,746.69	.00	J34
GP 23281 / AMHERST	A 091508	.00	.00	4,149.68	4,149.68	.00	J34
NSF GP 24496	A 091600	.00	.00	22,327.64	22,327.64	.00	J37
NSF GP 24498	A 091601	.00	.00	6,000.50	6,000.50	.00	J37
NSF GK 24514	A 091605	.00	.00	7,480.47	7,480.47	.00	M14
NSF GB24557/AMHERST	A 091606	.00	.00	7,905.96	7,905.96	.00	J21
GP 24624 AMHERST	A 091607	.00	.00	4,485.39	4,485.39	.00	J38
GB 25452 / AMHERST	A 091608	.00	.00	7,511.95	7,511.95	.00	J22
GP 25909	A 091609	.00	.00	.00	.00	.00	J34
GP 26108	A 091610	.00	.00	4,952.21	4,952.21	.00	M15
GB 27051- AMHERST	A 091700	.00	.00	5,768.67	5,768.67	.00	J33
GA 27082 / AMHERST	A 091701	.00	401.90	22,626.06	23,027.96	.00	S18
GP 27530	A 091702	.00	.00	.00	.00	.00	J34
GB 27644	A 091703	.00	.00	.00	.00	.00	J34
GA 28035	A 091705	.00	.00	3,092.67	3,092.67	.00	J39
GB 28225	A 091707	.00	.00	1,285.35	1,285.35	.00	J39
GS 27675	A 091708	.00	.00	694.07	694.07	.00	J12
GP 28255	A 091709	.00	.00	20,658.49	20,658.49	.00	J38
GP 28054	A 091710	.00	.00	2,284.00	2,284.00	.00	J34
GP 28325	A 091712	.00	.00	3,035.05	3,035.05	.00	J38
GP 28611	A 091714	.00	.00	2,421.34	2,421.34	.00	J38
GP 29664	A 091715	.00	.00	4,535.49	4,535.49	.00	J37
GP 28610X	A 091716	.00	.00	.00	.00	.00	S17
GP 28940	A 091717	.00	.00	.00	.00	.00	J34
GK 29197	A 091718	.00	.00	4,921.21	4,921.21	.00	K10
GA 29501	A 091720	.00	.00	8,850.94	8,850.94	.00	S19
GP 29103	A 091722	.00	.00	1,705.78	1,705.78	.00	J37
GP 29439	A 091724	.00	.00	.00	.00	.00	J34
20/02 NATIONAL SCIENCE FOUNDATION	TOTALS	349.58	6,231.33	927,553.24	934,134.15	.00	
20/03 AGRICULTURE							
ARS 12-14-100 8870 (44)	A 062000	3,543.81	29.85	.00	2,677.66	896.00	K15
ARS 12 14 10029 (91)	A 062001	3,579.22	.00	.00	3,579.22	.00	K15
DA-12-14-100-10457 (81) AMHERST	A 062003	.00	999.96	.00	999.96	.00	K07
USDA 23 00 019	A 067600	948.46	.00	948.46CR	.00	.00	K11
DA 42-00-038	A 067603	.00	.00	5,000.00	4,919.04	80.96	K11

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/03 AGRICULTURE	CONTINUED						
USDA FORESTRY #23-00-263	A 067604	.00	.00	.00	.00	.00	K66
USDA FORESTRY #23-00-263	A 067605	.00	.00	.00	.00	.00	K12
DA-FS-23-00-263-S4	A 067606	.00	.00	250.00	27.77	222.23	K66
USDA EXTENTION SERVICE -- BEATTIE	A 067607	.00	1,500.00	.00	.00	1,500.00	K11
DA SCS 42-00-052	A 067610	.00	2,700.00	3,000.00	5,662.00	38.00	K11
DA ERS FPE-X-8	A 067701	.00	.00	1,000.00	915.34	84.66	K03
20/03 AGRICULTURE	TOTALS	8,071.49	5,229.81	8,301.54	18,780.99	2,821.85	
20/04 AIR FORCE							
AF 33615 68 C 1053	A 060701	272.89	7,560.96	3,661.55CR	4,172.30	.00	M14
AF 19628 68 C 0214	A 060702	93.09	3,586.74	3,679.83CR	.00	.00	K64
USAF F 19628 70 C 0199	A 060703	260.27	10,244.73	4,554.33CR	5,950.67	.00	J38
ARPA CONTRACT F19628-70-C-0296	A 060704	.00	40,467.22	3,634.89	43,538.00	564.11	J38
AF F19628-71-C-0130	A 060705	.00	.00	.00	.00	.00	M12
AF 19628 2486	A 062300	450.22	725.18	725.18CR	450.22	.00	J36
AFOSR 68 1440	A 062501	3,234.13	.00	183.03CR	3,051.10	.00	J38
AFOSR 68 1434	A 062601	1,550.55	30,514.00	7,619.91CR	16,028.64	8,416.00	S17
AFOSR 68 1384	A 062801	2,438.89	.00	239.23	2,423.12	255.00	J34
AFOSR 68 1527	A 063001	8,184.43	17,056.00	4,409.00CR	10,824.57	10,006.86	M13
AFOSR 69 1722	A 063101	3,264.73	18,909.00	5,083.00CR	9,483.49	7,607.24	M15
AFOSR-71-1977/AMHERST	A 063203	.00	10,000.00	2,420.00CR	3,749.03	3,830.97	J34
AFOSR-71-2111	A 063204	.00	6,589.00	1,800.00CR	2,410.92	2,378.08	M15
AFOSR 72-2202	A 063205	.00	.00	.00	.00	.00	J34
AFOSR 69 1748	A 063301	5,727.48	.00	1,005.84	6,733.32	.00	J38
20/04 AIR FORCE	TOTALS	25,476.68	145,652.83	29,255.87CR	108,815.38	33,058.26	
20/05 ARMY							
DACW 72 67 C 0004	A 063502	306.51	8,945.19	3,469.62CR	5,588.43	193.65	J36
DAHC 04 68 C 0028	A 063503	483.23	10,149.65	3,101.68CR	6,931.23	599.97	S17
DAHC 19 69 G 0008	A 063504	81.56	55.00	68.79	205.35	.00	J22
DAHC 04-70-C-0043	A 063507	.00	3,855.78	1,644.22	5,021.50	478.50	S12
DACW 72-70-C-0029	A 063508	1,190.00	28,584.03	6,314.50CR	23,459.53	.00	J36
DAHC 04-70-C-0064	A 063509	.00	1,725.38	1,800.00	1,725.38	1,800.00	J38
DA 49 193 MD 2634	A 063600	.00	.00	.00	.00	.00	N13
DA 49 193 MD 2989	A 063602	20.08	.00	20.08CR	.00	.00	J34
DA 49 193 MD 3036	A 063603	4.90	.00	.00	.00	4.90	M13
DA ARO D 31 124 70 G37	A 063701	6,133.95	8,009.29	225.83CR	13,967.41	.00	M15

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/05 ARMY	CONTINUED						
DA ARO D-31-124-70-G65	A 063801	2,867.40	24,140.00	4,965.00CR	11,750.08	10,292.32	M14
DA ARO D 31 124 0491	A 063900	161.93	.00	161.93CR	.00	.00	J34
DA ARO D 31 124 G 859	A 064003	411.85	29.47	53.32	494.64	.00	J38
DA ARO D 31-124-71 G113	A 064004	.00	.00	.00	.00	.00	S17
DA AB 07-71-C-0260	A 064101	.00	.00	2,000.00	1,574.00	426.00	M15
20/05 ARMY	TOTALS	11,711.41	85,493.79	12,692.31CR	70,717.55	13,795.34	
20/06 AEC							
AEC D NET 11 67	A 064202	219.10	.00	219.10CR	.00	.00	J34
AEC AT 30 1 3561	A 065000	2,165.22	.00	14.16	1,325.92	853.46	J33
AEC AT 30 1 3626	A 065002	303.99CR	20,344.40	4,778.34CR	12,514.48	2,747.59	J39
AEC AT 30 1 3651	A 065003	8,243.25	151,000.00	34,569.66CR	95,671.94	29,001.65	J38
AEC AT 30 1 3812	A 065004	.00	.00	.00	.00	.00	J38
AEC AT 30 1 3651 B	A 065005	6,820.08	14,500.00	3,680.05CR	11,767.31	5,872.72	J38
AEC AT 30 1 4096	A 065006	8,269.08	36,902.20	3,341.00CR	39,386.38	2,443.90	J38
AEC-(AT-30)4241 AMHERST	A 065007	.00	27,945.00	2,502.60CR	25,442.40	.00	S18
20/06 AEC	TOTALS	25,412.74	250,691.60	49,076.59CR	186,108.43	40,919.32	
20/07 NASA							
NAS 12 606 A	A 066003	443.38	.00	443.38CR	.00	.00	M15
NAS 12 606 B	A 066004	443.38CR	.00	443.38	.00	.00	M15
NAS 12 2175	A 066005	.00	41.71	40.42CR	1.29	.00	J38
NGR 22 010 018	A 066203	2,107.97CR	25,021.47	5,003.28CR	13,992.42	3,917.80	M15
NGR 22 010 023	A 066204	3,696.44CR	37,552.25	5,394.21CR	28,461.60	.00	J38
NGR 22 010 019	A 066205	605.75	3,000.00	1,798.21CR	1,807.54	.00	M14
NGR 22 010 012	A 066206	.08	.00	.08CR	.00	.00	M15
NGR 22 010 025	A 066207	14,628.79CR	95,426.36	9,891.14CR	70,906.43	.00	J38
NGR 22 010 029	A 066208	2,712.60	20,536.36	2,818.55CR	20,430.41	.00	J34
NGR 22 010 039	A 066209	1,302.16CR	75,083.12	16,983.96CR	56,797.00	.00	J38
NGR 22 010 042	A 066210	72.31	.00	72.31CR	.00	.00	J38
NGR 22 010 041	A 066211	4.66	.00	4.66CR	.00	.00	J38
NGR 22-010-054	A 066212	2,043.05CR	3,056.20	104.10	1,117.25	.00	J36
NGR-22-010-063	A 066213	3,671.82	.00	189.20CR	738.94	2,743.68	M14
NASA- NGR 22-010-052	A 066214	300.00CR	6,558.30	330.87CR	5,927.43	.00	J36
NASA NGL 22-010-076	A 066215	1,135.00CR	4,628.70	2,381.04	5,874.74	.00	J36
NASA 22-010-045/AMHERST	A 066216	.00	24,000.00	7,152.77CR	16,177.02	670.21	J38
NGR 22-010-089	A 066217	.00	750.00	.00	535.30	214.70	J36

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/07							
20/07 NASA	TOTALS	18,146.19CR	295,654.47	47,194.52CR	222,767.37	7,546.39	
20/08 DEPARTMENT OF INTERIOR							
WR B003	A 060501	7,353.73	.00	.00	6,395.94	957.79	J13
WR B004	A 060502	8,687.91	.00	.00	8,460.41	227.50	K11
WR B005	A 060503	12,982.33	.00	.00	12,315.49	666.84	M13
WR B006	A 060504	489.54	.00	.00	169.06	320.48	K13
WR B008	A 060505	783.21	13,000.00	.00	12,512.49	1,270.72	M13
WR B010	A 060506	8,635.71	.00	.00	6,906.27	1,729.44	K11
WR B011	A 060507	5,016.66	44,190.00	.00	37,324.87	11,881.79	M13
WR B012	A 060508	10,682.61	30,992.00	.00	34,693.95	6,980.66	K11
WR B014	A 060509	17,550.00	.00	.00	11,656.00	5,894.00	S14
WR B015	A 060510	1,408.57	13,680.00	.00	14,137.67	950.90	K11
WR-B017	A 060511	.00	16,666.00	.00	4,596.12	12,069.88	K03
WR-B018	A 060512	.00	16,500.00	967.44	17,467.44	.00	J13
WP 14 12 7	A 065200	239.00CR	.00	239.00	.00	.00	M13
DI 14 01 0001 1251	A 065202	.00	.00	.00	.00	.00	J34
DI FWPCA 16030 DVB	A 065204	13.08CR	16,091.11	8,270.77CR	7,807.26	.00	K13
DI 05W 14 01 0001 2297	A 065205	13,932.28	11,000.00	547.33CR	9,950.54	14,434.41	J34
DI 16030 DVB-2	A 065207	96.83	16,124.46	7,382.29	23,512.37	91.21	K13
DI 14 16 005 3124	A 065303	307.20CR	413.77	.00	106.57	.00	K11
BSFW 14-16-0005-3174 (FS)	A 065304	632.00CR	4,650.12	310.12CR	3,687.33	20.67	K11
DI 14-31-0001-3377	A 065305	.00	28,000.00	6,652.00CR	12,714.03	8,633.97	S14
DI 14 17 0004 315	A 065503	.00	.00	.00	.00	.00	K11
DI BOM G0111343	A 065504	.00	.00	5,000.00	4,929.98	70.02	M12
EPA-68-02-0084	A 065701	.00	.00	.00	.00	.00	K73
DI FWPCA 18050 DBT	A 065821	423.79	3,820.49	2,742.44CR	1,501.84	.00	K11
DI FWPCA 17070 DZS	A 065831	284.61	26,090.25	11,312.20CR	15,062.66	.00	M13
DI FWPCA 17050 EHG	A 065841	931.36	.00	13.95	945.31	.00	M13
DI17050-EHG-2/AMHERST	A 065842	.00	15,435.19	5,064.81	20,095.09	404.91	M13
WP 01239-01	A 074601	.00	1,030.97	1,030.97CR	.00	.00	M13
WP 01239 02	A 074602	1,525.27CR	1,002.14	523.13	.00	.00	M13
WP 01408 01	A 074701	261.32	.00	124.18CR	137.14	.00	M13
20/08 DEPARTMENT OF INTERIOR	TOTALS	86,803.91	258,686.50	11,799.39CR	267,085.83	66,605.19	
20/09 NONR							
N 600 167 65486 XFBM	A 066202	.00	.00	.00	.00	.00	M13
NONR 3357 01	A 066300	197.40	514.41	514.41CR	123.60	73.80	S17

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/09 NONR	CONTINUED						
NONR 3357 02	A 066500	290.24CR	.00	290.24	.00	.00	M12
N 00014 67 A 230 0001	A 066600	7,579.33	85,702.99	12,352.00CR	79,864.46	1,065.86	J36
N 62399-70-C-0025	A 066701	.00	19,453.17	546.83	19,486.84	513.16	M13
N 00014 67 A 0230 0002	A 066801	228.37	36,238.38	6,750.22CR	29,005.12	711.41	J38
N 00014 67 A 0230 0003	A 066802	70.63	5,485.67	5,556.30CR	.00	.00	J38
N 00014 67 A 0230 0004	A 066803	788.94	5,731.15	380.34	6,494.99	405.44	K15
N0014-67A 0230-0005	A 066804	418.17	22,505.78	5,441.96CR	17,096.57	385.42	J34
N00014-62-A-0230-0006/AMHERST	A 066805	.00	16,927.57	6,347.55	22,971.94	303.18	L13
NONR 3357 07	A 067000	.00	.00	.00	.00	.00	M13
NONR 3357 05	A 067100	.00	.00	.00	.00	.00	J32
NONR 3357 08	A 067202	475.56	8,958.63	7,593.63CR	1,840.56	.00	J17
THEMIS N00014 68 A 0146 1	A 067401	43,891.50	196,300.37	237,749.41CR	2,125.00	317.46	M11
THEMIS N00014 68 A 0146 2	A 067402	789.40CR	.00	789.40	.00	.00	M14
THEMIS N00014 68 A 0146 3	A 067403	2,638.42CR	.00	11,877.93	9,239.51	.00	M14
THEMIS N00014 68 A 0146 4	A 067404	3,276.38CR	.00	19,539.96	16,263.58	.00	M12
THEMIS N00014 68 A 0146 5	A 067405	.00	.00	.00	.00	.00	J34
THEMIS N00014 68 A 0146 6	A 067406	13,428.17CR	.00	54,621.30	41,193.13	.00	M15
THEMIS N00014 68 A 0146 7	A 067407	4,484.52CR	.00	12,306.22	7,821.70	.00	M13
THEMIS N00014 68 A 0146 8	A 067408	.00	.00	.00	.00	.00	M13
THEMIS N00014 68 A 0146 9	A 067409	4,561.08CR	.00	17,704.80	13,143.72	.00	M13
THEMIS N00014 68 A 0146 10	A 067410	3,075.04CR	.00	10,208.42	7,133.38	.00	M13
THEMIS N00014 68 A 0146 11	A 067411	.00	.00	.00	.00	.00	M12
THEMIS N00014 68 A 0146 12	A 067412	2,697.99CR	9.43	6,202.24	3,513.68	.00	M14
THEMIS N00014 68 A 0146 13	A 067413	3,155.93CR	7.00	9,022.75	5,873.82	.00	M14
THEMIS N00014 68 A 0146 14	A 067414	.00	.00	.00	.00	.00	M11
THEMIS N00014 68 A 0146 1A	A 067415	1,816.92CR	67.79	6,201.07	4,451.94	.00	M11
THEMIS N00014 68 A 0146 16	A 067416	1,623.07CR	.00	15,750.24	14,127.17	.00	M14
N00014-68-A0146-P001-17 AMHERST	A 067417	.00	.00	5,112.80	5,112.80	.00	M13
20/09 NONR	TOTALS	11,812.74	397,902.34	99,055.84CR	306,883.51	3,775.73	
20/10 EDUCATION							
OEG 1 6 000496 0662	A 068202	10,787.15CR	18,089.86	7,015.89CR	286.82	.00	Q11
OEG 0 8 003093 031 B	A 068210	8,944.25	.00	.00	8,944.25	.00	H11
OEG 0 9 311104 3112 031 B	A 068212	3,701.24	.00	1,064.70CR	2,636.54	.00	H11
OEG 1-70-0010	A 068218	4,366.34	.00	.00	2,799.92	1,566.42	Q11
OEG 1-70-00039-0019 (509)	A 068220	240.00CR	5,185.00	717.88CR	4,201.96	25.16	J21
OEG 1-70-00014-0020 (509)	A 068221	.00	4,420.00	1,187.45CR	1,021.53	2,211.02	L12
OEG 1-70-00052-0021	A 068222	.00	4,250.00	617.12	4,867.12	.00	J21
OEG 1-71-0002-(509) AMHERST	A 068228	.00	.00	4,281.30	4,281.30	.00	J21

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/10 EDUCATION	CONTINUED						
OEG 1 8 08A 028 0032 058	A 068303	2,227.38CR	2,994.00	766.62CR	.00	.00	J21
OEG 1 9 090003 0102 010	A 068304	47.49CR	.00	1,022.76	975.27	.00	Q11
OEG 1 9 090022 0109 010	A 068305	435.33	508.24	80.26	515.59	508.24	F26
OEG 0 9 313519 3519 097	A 068306	42,122.51	158,306.20	7,965.25CR	192,463.46	.00	Q11
OEC 0 9 310417 4040	A 068307	3,279.22	9,882.11	7,359.11CR	5,800.73	1.49	Q11
OEC-0-70-5059 (284)	A 068309	.00	50,117.68	3,460.20CR	46,028.40	629.08	Q11
OEG 0-71-0010 (509)	A 068311	.00	.00	.00	.00	.00	J24
OEG 0-71-0108 (508)	A 068312	.00	.00	.00	.00	.00	J21
OE 6 10 014	A 068602	.00	.00	.00	.00	.00	J24
OE 6 10 349	A 068800	.00	.00	.00	.00	.00	H11
OEG 1 7 000211 0211	A 069200	34.29CR	195,598.86	67,524.86CR	127,527.23	512.48	H11
20/10 EDUCATION	TOTALS	49,512.58	449,351.95	91,060.52CR	402,350.12	5,453.89	
20/11 U.S. DEPT OF LABOR							
USDI 91 23 66 55	A 061800	1,001.71CR	3,002.05	2,000.34CR	.00	.00	T11
USDI 91 23 68 27	A 061801	596.07	.00	13.90	609.97	.00	T15
USDI 91 23 68 931	A 061802	197.45	.00	.00	197.45	.00	T15
USDI 91 23 69 20	A 061803	3,189.89	.00	.00	1,600.25	1,589.64	T11
20/11 U.S. DEPT OF LABOR	TOTALS	2,981.70	3,002.05	1,986.44CR	2,407.67	1,589.64	
20/12 OTHER							
MASS BUREAU OF VOCATIONAL ED 0662	A 060201	1,391.52	49.20	219.81CR	1,220.91	.00	Q11
NEAH H 69 0 41	A 061702	.00	.00	.00	.00	.00	J14
A-69-0-212	A 061703	.00	.00	.00	.00	.00	E19
ENDOWMENT FOR HUMANITIES	A 061704	3,209.75CR	11,000.00	722.68CR	6,664.90	402.67	J18
DC E 174 69N	A 064301	958.23	.00	18,709.42	19,667.65	.00	J38
COMMUNITY SERVICE UI 11 67	A 065102	.00	.00	.00	.00	.00	N11
COMMUNITY SERVICE 68 024 005	A 065104	.00	.00	.00	.00	.00	J13
TITLE 1-70-025-012	A 065105	8,340.00	5.08	.00	5,736.84	2,608.24	K73
TITLE 1-70-025-011	A 065106	2,802.02	2,520.00	.00	3,450.37	1,871.65	W11
20/12 OTHER	TOTALS	10,282.02	13,574.28	17,766.93	36,740.67	4,882.56	
SECT-20 FEDERAL GRANTS AND CONTRACTS-RESEARCH		216,899.31	1,991,532.60	1,475,242.88	3,501,677.03	181,997.76	

Schedule F-2 (Continued)

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 21 AGENCY FUNDS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
STATE EMPLOYEES INSURANCE PREMIUM	A 038100	71,160.35	27,786.05	157,205.11	195,623.51	60,528.00	B11
TAX SHELTER ANNUITIES	A 039900	79,078.64	602,507.07	41,620.00CR	602,985.28	36,980.43	B11
ALUMNI GENERAL ACTIVITIES	A 094000	.00	.00	33,355.28	28,595.41	4,759.87	AA5
BIERHOST AGENCY	A 094200	182.31	.00	.00	150.57	31.74	J33
CARNEGIE INTERNSHIP PROGRAM	A 094300	368.30	.00	.00	.00	368.30	J17
CCEBS AGENCY	A 094350	25,990.96CR	197,394.09	80,254.05CR	85,500.25	5,648.83	E11
DOMESTIC ACTIONS PROGRAM	A 094400	.00	.00	.00	.00	.00	Q11
EASTERN PUBLIC RADIO NETWORK (EPRN)	A 094430	.00	12,000.00	.00	11,428.11	571.89	AA6
EDUCATION FILM AND TAPE	A 094450	1,101.02	20.29	.00	253.83	867.48	Q11
ENGLISH LITERARY RENAISSANCE/AMHERST	A 094490	.00	.00	4,500.00	3,868.50	631.50	J14
EQUIPMENT SHORTAGE AF ROTC	A 094500	194.68	33.90	.00	.00	228.58	RA1
EQUIPMENT SHORTAGE AR ROTC	A 094700	1,296.66	26.64	.00	64.18	1,259.12	R81
EDUCATIONAL TESTING SERVICE	A 094800	225.77	.00	4.77CR	221.00	.00	F26
FEDERAL RETIREMENT AGENCY	A 094855	.00	15,700.00	.00	15,172.28	527.72	K01
FEDERAL TAX PERSONAL TEL CALLS	A 094900	111.36	401.58	.00	379.82	133.12	B11
4 H ACTIVITIES	A 095100	1,740.36	1,018.60	.00	1,527.31	1,231.65	K33
HONORS BANQUET FUND	A 095400	304.87	.00	.00	304.87	.00	AB1
MASSACHUSETTS EDUCATIONAL FILM FUND	A 095700	4,852.93	5,039.00	.00	6,512.74	3,379.19	H11
MASSACHUSETTS REVIEW	A 095900	8,010.38	33,098.85	13,000.00	40,838.47	13,270.76	AA1
MILDRED PIERPONT MEMORIAL FUND	A 096100	185.00	.00	.00	.00	185.00	B11
COLLEGE PUBLICATIONS	A 096300	2,246.16	2,168.73	.00	1,720.12	2,694.77	J14
WILDLIFE SERVICE FUND	A 096500	3,771.50	42,133.64	.00	40,003.33	5,901.81	K32
SPECIAL MILITARY FUND	A 096700	67.50	30.00	.00	.00	97.50	R81
STUDENT DEPOSIT ACCOUNT	A 096900	118,982.56	2,926,561.64	.00	2,924,237.75	121,306.45	B11
HEALTH AND ACCIDENT INSURANCE	A 097100	6,579.95	74,973.00	.00	81,008.50	544.45	F25
UM CHAPTER AAUP AMHERST	A 097250	.00	60.00	.00	51.92	8.08	L11
UNITED STATES SAVINGS BONDS / NOTES	A 097300	4,110.88	98,261.74	.00	98,303.14	4,069.48	B11
VICTORIAN PERIODICALS/AMHERST	A 097450	.00	400.00	48.71	448.71	.00	J14
WESTERN MASS BROADCASTING COUNCIL	A 097500	3,906.71CR	90,140.79	.00	82,642.97	3,591.11	AA6
SECT-21 AGENCY FUNDS		274,673.51	4,129,755.61	86,230.28	4,221,842.57	268,816.83	

UNIVERSITY OF MASSACHUSETTS AT AMHERST
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SUMMARY OF ALL SECTIONS

ACCOUNT	NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71
SECT-03	FEDERAL FELLOWSHIP		31,437.96	60,328.84	215,567.20	293,567.03	13,766.97
SECT-04	MISCELLANEOUS FELLOWSHIPS		76,685.49	97,439.55	180.31CR	123,879.05	50,065.68
SECT-05	SCHOLARSHIPS		127,107.14	307,643.24	69,500.58	443,101.73	61,149.23
SECT-06	AUXILIARY ENTERPRISES		2,127,447.32	6,258,420.40	9,519,900.91	16,609,330.52	1,296,438.11
SECT-07	CLEARING ACCOUNT		105,956.00CR	25,933,800.03	14,909,419.40CR	11,427,202.94	508,778.31CR
SECT-08	GENERAL PURPOSE FUND		1,254,936.15	1,576,911.68	241,795.59	2,166,080.43	907,562.99
SECT-09	GIFTS & GRANTS PENDING TRUSTEE ACTION		4,450.02	10,658.63	.00	8,894.85	6,213.80
SECT-10	LIBRARY FUNDS		9,783.54	52,574.79	538.70	10,985.10	51,911.93
SECT-11	MISCELLANEOUS SERVICE FUNDS		349,152.43	1,150,626.70	847,722.24	2,034,198.16	313,303.21
SECT-12	STUDENT PROGRAMS		435,360.58	1,645,143.08	608,269.71	2,230,655.64	458,117.73
SECT-13	SPONSORED RESEARCH		188,035.72	229,575.86	7,051.85	174,165.35	250,498.08
SECT-14	U OF M SPONSORED RESEARCH		39,339.04	196.86	89,497.75	69,301.27	59,732.38
SECT-15	NONPROFIT ORGANIZATIONS & FOUNDATIONS		233,671.11	1,062,284.67	35,177.48	881,797.65	449,335.61
SECT-16	FEDERAL GRANTS AND CONTRACTS TRAINING		16,207.00	857,966.78	792,959.81	1,502,976.55	164,157.04
SECT-17	FEDERAL GRANTS AND CONTRACTS-FACILITIES		15,576.00	.00	.00	.00	15,576.00
SECT-18	FEDERAL GRANTS AND CONTRACTS EQUIPMENT		8,698.55CR	26,189.00	133,285.61	150,118.57	657.49
SECT-19	FEDERAL GRANTS CONTRACTS OTHER PURPOSES		77,598.17	761,503.03	515,237.34	1,315,979.09	38,359.45
SECT-20	FEDERAL GRANTS AND CONTRACTS-RESEARCH		216,899.31	1,991,532.60	1,475,242.88	3,501,677.03	181,997.76
SECT-21	AGENCY FUNDS		274,673.51	4,129,755.61	86,230.28	4,221,842.57	268,816.83
	TOTALS FOR TRUST FUNDS-- SECTIONS 03-05		235,230.59	465,411.63	284,887.47	860,547.81	124,981.88
	TOTALS FOR TRUST FUNDS-- SECTIONS 06-20		4,853,801.84	41,557,384.11	642,739.53CR	42,083,363.15	3,685,083.27
	TOTALS FOR TRUST FUNDS-- SECTIONS 03-20		5,089,032.43	42,022,795.74	357,852.06CR	42,943,910.96	3,810,065.15
	GRAND TOTALS FOR TRUST AND AGENCY FUNDS		5,363,705.94	46,152,551.35	271,621.78CR	47,165,753.53	4,078,881.98

Schedule F-3

Athletic Trust Fund

Statement of Receipts, Disbursements and Balances

Balance, July 1, 1970			$ 12,014.40
Receipts:			
Student Fees	$559,574.00		
Recreational Activity Fee	6,300.00		
Other Receipts	33,350.32		
		$555,763.53	
Less:			
Refund of Student Fees	$ 8,163.20		
Transfer to U.M. Bldg. Authority Project #4 (Stadium)	80,000.00		
		$ 88,163.20	
Net Receipts			$511,061.12
Total Available			$523,075.52
Disbursements:			
Intercollegiate Athletics		$201,215.31	
Intramural & Other Programs		111,408.19	
Athletic Injury Care		15,248.33	
Travel		19,811.44	
Band & Cheerleaders		5,686.69	
Operating Expenditures		114,838.24	
Contingencies		4,829.90	
Capital Outlay		11,797.05	
Miscellaneous Expenses		10,289.20	
Publicity		5,840.88	
Total Disbursements			$500,965.23
Balance, June 30, 1971			$ 22,110.29

Schedule F-3 (Continued)

Athletic Reserve Account

Balance, July 1, 1970		$ 33,397.33
Interest on Investments		94.91
Funds Available		$ 33,492.24
Less: Transfer to Barber Scholarship Fund		2,660.43
Balance, June 30, 1971		$ 30,831.81

Athletic Reserve Account - Special

Balance, July 1, 1970		$257,087.01
Interest on Investments		16,137.86
Funds Available		$273,224.87
Disbursements:		
All Weather Running Track	$18,345.80	
Resurfacing Tennis Courts	13,813.60	
Swimming Pool Filter	9,597.00	
Fences and Security Screens	3,259.00	
		45,015.40
Balance, June 30, 1971		$228,209.47

George H. Barber Scholarship Fund

Balance, July 1, 1970		$ 6,125.69
Income from Sales, Admission and Donations		147,868.42
Transfers from Student Automatic Service	$50,000.00	
from Athletic Reserve Fund	2,660.43	
		52,660.43
Funds Available		$206,654.44
Disbursements:		
Scholarship		206,654.44
Balance, June 30, 1971		-0-

Schedule F-4

Boarding Halls

Statement of Receipts, Disbursements and Balances

Balance, July 1, 1970			$ 73,700.72
Receipts:			
Income		$5,819,891.40	
Funds Advanced		617,000.00	
		6,436,891.40	
Less: Student Refunds	$225,589.38		
Transfer to: Bologna 1969 Fund	2,250.00		
University of Massachusetts Building Authority Project Three	133,735.21		
University of Massachusetts Building Authority Project Five	162,428.18		
University of Massachusetts Building Authority Project Seven	164,777.91		
University of Massachusetts Building Authority Project Nine	167,159.85		
		855,940.53	
			5,580,950.87
			5,654,651.59
Disbursements:			
Salaries and Wages		2,606,749.00	
Food Purchases		2,521,697.57	
Clothing		8,069.74	
Housekeeping Supplies		131,930.82	
Heat and Other Plant Operations		12,371.59	
Travel		920.50	
Advertising & Printing		14,826.63	
Repairs		67,815.19	
Office & Administration		9,290.42	
Equipment		12,578.56	
Rental		258,951.31	
Capital Outlay		9,266.87	
Total Disbursements			5,654,468.20
Balance, June 30, 1971			$ 183.39

Schedule F-5

Recognized Student Organizations

Statement of Receipts, Disbursements and Balances
Year Ended June 30, 1971

Balance July 1, 1970			
Amherst Savings Bank		$ 90,209.40	
First National Bank of Amherst		106,422.90	
Total			$ 196,632.30
Receipts:			
Amherst Student Fees (Net)		$ 661,100.20	
Cash Receipts	$516,898.33		
Add In-transit Items 6/30/70	1,656.30		
Less In-transit Items 6/30/71	(21.62)		
		518,533.01	
			1,179,633.21
Interactivity Receipts			2,269,934.13
Total			$3,646,199.64
Disbursements:			
Cash Disbursements		$1,096,725.59	
Add In-transit Items 6/30/70		12,199.45	
			$1,108,925.04
Interactivity Disbursements			2,269,934.13
			$3,378,859.17
Balance June 30, 1970			
Amherst Savings Bank		$ 95,274.13	
First National Bank of Amherst		172,066.34	
			267,340.47
Total			$3,646,199.64

Schedule F-6

Student Health Service

Statement of Receipts, Disbursements, and Balances

Balance, July 1, 1970		$ 15.39	
Receipts:			
Student Fees	$1,418,222.75		
Other Receipts	5,053.17		
Less: Student Refunds	21,909.55		
Net Receipts		1,401,366.37	
			$1,401,381.76
Disbursements:			
Salaries and Wages		1,085,047.52	
Food		6,225.17	
Clothing		1,387.42	
Housekeeping Supplies		14,497.20	
Laboratory and Medical Supplies		97,764.11	
Travel		7,263.06	
Printing and Advertising		7,995.37	
Repairs and Replacements		3,151.08	
Office and Administration Expences		27,767.14	
Equipment		10,960.04	
Rental		6,624.50	
Other		-0-	
Total Disbursements			1,268,682.61
Balance, June 30, 1971			$ 132,699.15

Schedule F-7

CAMPUS CENTER
UNIVERSITY STORE - AMHERST
INCOME STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1971

Sales		
Books	$1,424,189.82	
Supplies	717,929.43	
Lobby	133,396.24	$2,275,515.49
Cost of Goods Sold		
Beginning Inventory	685,084.36	
Purchases	2,292,264.96	
Freight In	32,067.90	
	3,009,417.22	
Less: Purchase Ret. & Allow.	355,803.79	
	2,653,613.43	
Less: Purchase Discounts	6,529.43	
	2,647,084.00	
Less: Ending Inventory	748,373.28	$1,898,710.72
Gross Profit On Sales		$ 376,804.77
Operating Expenses		
Payroll - Regular	172,333.18	
Payroll - Student	35,977.62	
Payroll - Hourly	99,466.11	
Employees' Group Insurance	4,651.26	
Insurance	2,416.63	
Office Supplies	7,726.95	
Store Supplies	15,630.93	
Telephone & Telegraph	3,348.83	
Postage	3,066.06	
Advertising	1,061.15	
Travel and Education	756.55	
Doubtful Accounts	5.74	
Repairs and Maintenance	1,652.13	
S.C.M. Copier - Expenses	2,770.17	
Cash Shortages	1,897.34	
Miscellaneous	3,102.35	
Bad Checks	64.95	$ 355,927.95
Net Income from Operations		$ 20,876.82
Other Income		
Lab Fee Commissions	17,625.04	
Post Office	5,499.96	
Lobby Counter	4,504.22	
Cash Overages	269.15	
Miscellaneous	1,742.87	
S.C.M. Copier Sales	3,374.50	$ 33,015.74
Other Expenses		
Transfer to General Fund	100,000.00	$ 100,000.00
Net Income for Period		$ (46,107.44)

CAMPUS CENTER
UNIVERSITY STORE
BALANCE SHEET
AS OF JUNE 30, 1971

Assets

Current Assets:		
Cash in Bank		$ (59,335.23)*
Cash on Hand		7,000.00
Petty Cash		1,000.00
Cash in Transit		-0-
Accounts Receivable		50,738.28
Accounts Receivable - Book Vendors		227,155.39
Accounts Receivable - Supply Vendors		1,468.90
Inventory - Books		555,416.00
Inventory - Supplies		190,896.00
Inventory - Lobby Counter		2,061.28
Prepaid Expenses		384.92
Total Current Assets		$ 976,785.54
Fixed Assets:		
Office Furniture and Fixtures	$ 18,451.85	
Less: Accumulated Depreciation	7,528.00	10,923.85
Machinery and Equipment	$ 24,683.40	
Less: Accumulated Depreciation	8,473.24	16,210.16
Automobiles and Trucks	$ 1,974.00	
Less: Accumulated Depreciation	-0-	1,974.00
Investment in Boston Campus Store		151,543.44
Total Assets		$1,157,436.99

Liabilities and Capital

Current Liabilities:	
Accounts Payable	$ 241,012.80
Accrued Payroll	-0-
Accrued Taxes - Ma. Sales Tax	101.94
Due to General Fund	-0-
Laboratory Fees	91,890.25
Other Current Liabilities	-0-
Total Current Liabilities	$ 333,004.99
Capital:	
Retained Earnings	824,432.00
Total Liabilities and Capital	$1,157,436.99

*Balance on June 30, 1971 is $5.26 as result of cash in transit June 12 - 30.

Schedule F-9

CAMPUS CENTER FOOD SERVICE
INCOME STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1971

Sales:		
Snack Bar	$ 548.39	
Hatch	385,795.73	
Ice Cream Bar	22,880.32	
Cafeteria	127,369.97	
Coffee Shop	273,583.59	
Catering	232,374.40	
Restaurant	230,189.25	$1,272,741.65
Cost of Goods Sold:		
Inventory, July 1, 1970	8,605.21	
Purchases	550,931.59	
Freight In	209.30	
	559,746.10	
Less: Purchase Discounts	2,203.72	
Total Available for Sale	557,542.38	
Less: Inventory, June 30, 1971	31,041.93	$ 526,500.45
Gross Profit on Sales		$ 746,241.20
Operating Expenses		
Payroll - Regular	414,594.00	
Payroll - Student	101,460.10	
Payroll - Hourly	75,333.25	
Purchased Services	13,917.57	
Employees' Group Insurance	12,683.47	
Insurance	2,350.22	
Office Supplies	5,736.36	
Printing and Stationery	6,194.60	
Restaurant Supplies	69,064.89	
Telephone and Telegraph	2,815.12	
Postage	143.96	
Advertising	3,514.15	
Travel and Education	715.07	
Doubtful Accounts	-0-	
Uniforms	1,466.20	
Linen	16,610.65	
Laundry	63.10	
China and Silver	2,050.53	
Repairs and Maintenance	3,376.47	
Utilities	58.44	
Depreciation	-0-	
Cash Shortages	2,409.46	
Miscellaneous	2,014.15	$ 736,571.76
Net Income from Operations		$ 9,669.44
Other Income		
Vending	1,114.94	
Juke Box	1,541.60	
Cash Overages	1,910.26	
Miscellaneous	5,653.56	$ 10,220.36
Net Income For Period		$ 19,889.80

Schedule F-10

CAMPUS CENTER FOOD SERVICE
BALANCE SHEET
AS OF JUNE 30, 1971

ASSETS

Current Assets:		
Cash in Bank		$ 3.69
Cash on Hand		1,900.00
Petty Cash		50.00
Accounts Receivable		94,381.89
Inventory - Food		23,959.27
Inventory - Liquor		7,082.66
Inventory - Supplies		-0-
Prepaid Insurance		7,050.78
Total Current Assets		$134,428.29
Fixed Assets:		
Office Furniture and Fixtures	$ 4,056.64	
Less: Accumulated Depreciation	1,227.01	2,829.63
Machinery and Equipment	$ 60,944.44	
Less: Accumulated Depreciation	17,934.89	43,009.55
Total Assets		$180,267.47

Liabilities and Capital

Current Liabilities:	
Accounts Payable	$ 71,291.27
Accrued Taxes - Mass. Old Age Tax	43.30
Loans	11,000.00
Total Current Liabilities	$ 82,334.57
Capital:	
Retained Earnings	$ 97,932.90
Total Liabilities and Capital	$180,267.47

Schedule F-11

CAMPUS CENTER
GENERAL FUND
INCOME STATEMENT
FOR THE FISCAL YEAR ENDED JUNE 30, 1971

INCOME	
Check Cashing Service Fees	$ 10,147.00
Custodial Fees	1,062.50
Amortization Fees - Continuing Education	23,550.00
Ticket Office	934.83
Games Area	6,438.37
Print Shop	72.71
Audiovisual Aids	(10,367.58)
Scheduling Office	(25,901.52)
Miscellaneous Income	8,912.02
Transfer from Program Office	8,430.45
Transfer from Amortization Fund	565,865.68
Transfer from University Store	100,000.00
Transfer from Project #11 Revenue/Student Fees	74,951.80
Total Income	$764,096.26
EXPENSES	
Administration and Business Office	$272,256.28
Physical Plant Management	343,787.97
Transfer to Continuing Education/Conferences	59,581.97
Total Expenses	$675,626.22
NET INCOME (LOSS) FOR PERIOD	$ 88,470.04

CAMPUS CENTER
M & O FUND
BALANCE SHEET
AS OF JUNE 30, 1971

ASSETS

Current Assets:		
Cash in Bank		($ 570.34)
Cash on Hand		31,450.00
Petty Cash		50.00
Accounts Receivable		281,853.60
Total Current Assets		$313,923.94
Fixed Assets:		
Office Furniture and Fixtures	$ 46,753.49	
Less; Accumulated Depreciation	14,397.39	32,356.10
Machinery and Equipment	$ 67,992.02	
Less: Accumulated Depreciation	14,204.49	53,787.53
Total Assets		$400,067.57

Liabilities and Capital

Current Liabilities:	
Accounts Payable	$ 38,284.56
Accrued Payroll	-0-
Key Deposits	101.75
Other Current Liabilities	-0-
Loans	265,000.00
Total Current Liabilities	$303,386.31
Capital:	
Retained Earnings	$ 96,681.26
Total Liabilities and Capital	$400,067.57

Schedule F-13

Campus Center Amortization Fund

Balance July 1, 1970		$824,609.78
Revenue		
Student Fees (1970 Summer School)	$ 20,285.90	
Receipts	9,122.50	
Less: Refunds	13,152.50	
		16,255.90
		$940,865.68
Operating Expenses		
Student Union Debt Service 10/15/70		120,000.00
		$720,865.68
Transfer to Other Funds		
Transfer to Campus Center M & O	$565,865.68	
Transfer to R.S.O.	155,000.00	
		720,865.68
Balance June 30, 1971		$ -0-

CAMPUS CENTER
PROJECT #11
ACCOMMODATIONS SERVICES
INCOME STATEMENT
FOR THE PERIOD ENDED JUNE 30, 1971

Sales		
Room Sales:		
Accommodations Services		$ 217,372.40
Residence Halls	$ 111,440.28	
Less: Transfer to Residence Hall Trust Fund	38,489.00	72,951.28
Other Department Sales:		
Telephone	$ 4,933.41	
Linen	9,068.98	
Laundry	751.29	
Restaurant	4,549.00	
Miscellaneous	1,263.95	20,566.63
		$ 310,890.31
Operating Expenses		
Payroll - Regular	$ 55,001.56	
Payroll - Student	63,478.43	
Payroll - Hourly	12,945.35	
Employees' Group Insurance	1,727.99	
Office Supplies	4,148.36	
Printing and Stationery	4,289.75	
Hotel Guest Supplies	4,208.68	
Linen and Uniforms	46,802.79	
Laundry	519.67	
Telephone and Telegraph	9,268.01	
Postage	309.11	
Advertising	92.00	
Travel and Education	322.59	
Repairs and Maintenance	1,201.04	
Rentals	8,164.55	
Foods	3,605.34	
Miscellaneous	4,703.98	220,789.20
Net Income from Operations		$ 90,101.11

Schedule F-15

CAMPUS CENTER
PROJECT #11
ACCOMMODATIONS SERVICES
BALANCE SHEET
FOR THE PERIOD ENDED JUNE 30, 1971

Assets		
Current Assets:		
Cash in Bank		$ 206,952.87
Cash on Hand		-0-
Petty Cash		-0-
Accounts Receivable	$ 21,440.69	
Less: Allowance for Doubtful Accounts	-0-	21,440.69
Total Current Assets		$ 228,393.56
Fixed Assets:		
Office Furniture and Fixtures	$ -0-	
Less: Accumulated Depreciation	-0-	-0-
Machinery and Equipment	$ -0-	
Less: Accumulated Depreciation	-0-	-0-
Automobiles and Trucks	$ -0-	
Less: Accumulated Depreciation	-0-	-0-
Total Assets		$ 228,393.56
Liabilities and Capital		
Current Liabilities:		
Accounts Payable		$ 135,422.46
Accrued Payroll		-0-
Other Current Liabilities		-0-
Total Current Liabilities		$ 135,422.46
Capital:		
Retained Earnings		92,971.10
Total Liabilities and Capital		$ 228,393.56

Schedule F-16

CAMPUS CENTER
PROJECT #11
PARKING GARAGE
INCOME STATEMENT
FOR THE PERIOD ENDED JUNE 30, 1971

Sales		
Parking Garage Rentals		$ 46,597.68
Operating Expenses		
Payroll - Regular	$ 11,605.29	
Payroll - Student	16,558.94	
Payroll - Hourly	1,330.16	
Employees' Group Insurance	270.99	
Garage Supplies	48.00	
Office Supplies	1,035.33	
Printing and Stationery	266.00	
Travel and Education	7.50	
Advertising	1,217.07	
Miscellaneous	417.27	32,756.55
Net Income from Operations		$ 13,841.13

Schedule F-17

CAMPUS CENTER
PROJECT #11
PARKING GARAGE
BALANCE SHEET
FOR THE PERIOD ENDED JUNE 30, 1971

Assets		
Current Assets:		
Cash in Bank		$ 46,597.68
Cash on Hand		-0-
Petty Cash		-0-
Accounts Receivable	$ -0-	
Less: Allowance for Doubtful Accounts	-0-	-0-
Total Current Assets		$ 46,597.68
Liabilities and Capital		
Current Liabilities:		
Accounts Payable		$ 32,756.55
Accrued Payroll		-0-
Other Current Liabilities		-0-
Total Current Liabilities		$ 32,756.55
Capital:		
Retained Earnings		13,841.13
Total Liabilities and Capital		$ 46,597.68

CAMPUS CENTER
PROJECT # 11
STUDENT FEE REVENUE ACCOUNT
ACCOUNT STATEMENT
FOR THE PERIOD ENDED JUNE 30, 1971

Balance - June 1, 1970				$ -0-
Revenue				
Student Fees			$888,231.33	
Undergraduates	$48/year			
Graduates	$38/year			
Less: Refunds			11,904.53	876,326.80
Operating Expenses				
Campus Center Debt Service		9/15/70	277,375.00	
		9/15/71	524,000.00	801,375.00
Balance - June 30, 1971				$ 74,951.80

Schedule G-1

Inventory of Land

Location	Acreage	Assessed Valuation June 30, 1971
Amherst	769.6	$3,309,280.00
Hadley	446.4	284,380.00
Amherst	46.0	197,800.00
Pelham	.5	100.00
Pelham	1,196.0	20,000.00
Belchertown	218.0	17,210.00
Belchertown	4.0	100.00
Sunderland	726.2	17,600.00
Leverett	28.8	270.00
East Wareham	28.6	74,520.00
Waltham	58.8	225,200.00
South Deerfield	363.7	21,020.00
Nantucket Island	107.0	13,000.00
Total	3,993.6	$4,180,480.00

Schedule G-2

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
5	1940	Amherst	Butterfield Hall (Dormitory)	$ 232,598.00
6	1947	Amherst	Chadbourne House (Dormitory)	260,000.00
7	1948	Amherst	Berkshire House (Administration)	165,266.00
8	1948	Amherst	Hampshire House (Administration)	165,266.00
9	1948	Amherst	Middlesex House (Administration)	163,800.00
24	1946	Amherst	Greenough House (Dormitory)	260,000.00
28	1940	Amherst	Lewis House (Dormitory)	177,019.00
29	1948	Amherst	Mills House (Dormitory)	375,000.00
30	1935	Amherst	Thatcher House (Dormitory)	193,950.00
38	1869	Amherst	Blaisdell House	4,000.00
48	1947	Amherst	Brooder House	100.00
49	1947	Amherst	Brooder House	100.00
50	1947	Amherst	Brooder House	100.00
51	1947	Amherst	Brooder House	100.00
52	1914	Amherst	Milker's Bungalow House	2,100.00
53	1910	Amherst	Harlow House	2,550.00
54	1922	Amherst	Hilton House	9,400.00
55	1922	Amherst	Hilton Garage	300.00
57	1884	Amherst	President's House	19,000.00
58	1955	Amherst	Montague House	8,000.00
59	1939	Amherst	Tillson Garage	384.00
60	1926	Amherst	Tillson House	6,714.00
61	1867	Amherst	Homestead House	14,800.00
62	1867	Amherst	Stockbridge House	9,100.00
63	1911	Amherst	Waiting Station (Shelter)	500.00
64	1930	Amherst	Scale House	250.00
65	1961	Amherst	Kiln	2,500.00
66	1918	Sunderland	Shed	1,500.00
67	1918	Sunderland	House	3,000.00
68	1961	Pelham	Radio Station	1,500.00
70	1929	Amherst	Garage	2,500.00
71	1918	Amherst	Grounds Tool Shed & Garage	245.00
72	1953	Amherst	Animal Isolation Laboratory	98,500.00
73	1957	Amherst	Thayer Laboratory	50,000.00
74	1911	Amherst	Apiary Laboratory	3,000.00
76	1959	Amherst	Power Supply Facility	3,432,764.00
77	1937	Amherst	Bowditch Lodge	50,000.00
79	1950	Amherst	Police Station Garage	63,800.00
80	1885	Amherst	Chapel - Classrooms	76,288.00
82	1959	Amherst	Goessmann Laboratory & Classrooms	2,896,900.00
83	1907	Amherst	Clark Hall Laboratory & Classrooms	67,400.00
84	1907		Greenhouse	
85	1953	Amherst	Worcester Dining Commons	985,300.00

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
86	1961	Amherst	Worcester Dining Commons (Addition)	$ 504,475.00
87	1903	Amherst	Draper Hall Classrooms	296,529.00
88	1947		Draper Hall - Annex (Storage)	
89	1889	Amherst	East Experiment Station Laboratory	14,000.00
90	1949	Amherst	Shade Tree Laboratory	23,400.00
91	1949	Amherst	Gunness Laboratory	374,500.00
92	1950	Amherst	Engineering Classrooms	1,120,753.00
93	1949	Amherst	Engineering Annex - Classrooms	118,500.00
94	1915	Amherst	Engineering Shops - Labs. & Classrooms	28,550.00
95	1933	Amherst	Farley 4-H Lodge	50,000.00
96	1955	Amherst	Durfee Greenhouses	69,684.00
97	1910	Amherst	Fernald Hall - Laboratory	80,000.00
98	1910	Amherst	Fernald Hall Greenhouse	825.00
99	1911	Amherst	Fisher Cold Storage	24,616.00
100	1912	Amherst	Flint Laboratory	210,723.00
101	1930	Amherst	Chenoweth Laboratory	69,966.00
103	1867	Amherst	Forestry - Classrooms and Laboratory	2,590.00
104	1909	Amherst	French Hall - Classrooms and Labs.	74,356.00
105	1908	Amherst	French Hall Greenhouse	25,500.00
106	1915	Amherst	Hospitals	34,300.00
107	1960	Amherst	Bartlett - Classrooms and Lab.	2,181,125.00
109	1931	Amherst	Storage - Lumber	2,150.00
110	1923	Amherst	Tillson Storage	1,574.00
111	1957	Amherst	Machmer Hall - Classrooms	967,578.00
112	1947	Amherst	Marshall Annex - Classrooms	68,459.00
113	1915		Marshall Hall - Classrooms and Labs.	
115	1920	Amherst	Memorial Hall - Classrooms	107,425.00
116	1898	Amherst	Munson Hall - Administration	70,127.00
117	1899		Munson Annex - Administration	
118	1891	Amherst	Hatch - Classrooms and Labs.	19,374.00
120	1950	Amherst	Paige Laboratory	487,500.00
121	1931	Amherst	Hicks - Physical Education (Men)	287,500.00
122	1931		Hicks - Physical Education (Men)	
123	1959	Amherst	Physical Education (Women)	1,716,581.00
124	1950	Amherst	Hasbrouck - Classrooms & Labs.	501,000.00
125	1907	Amherst	Photography Laboratory	12,000.00
126	1959	Amherst	Public Health - Classrooms & Labs	1,360,800.00
127	1960	Amherst	Morrill Science I - Classrooms & Labs.	1,941,020.00
128	1948	Amherst	Skinner Hall - Classrooms & Labs.	596,700.00
129	1885	Amherst	South College Administration	100,300.00
130	1912	Amherst	Stockbridge - Classrooms & Labs.	417,066.00
132	1960	Amherst	Dickinson Hall - Classrooms & Labs.	468,105.00
133	1918	Amherst	Power Supply Facility	17,665.00
134	1952	Amherst	Power Supply Facility	263,615.00
135	1959	Amherst	Bowditch - Classrooms & Labs.	293,500.00
136	1911	Amherst	Grinnell Arena	38,000.00
137	1929		Abattoir Slaughter House	
139	1950		Storage - Maintenance	
141	1931	Amherst	Ticket Booth Athletic	500.00
145	1956	Amherst	Poultry House	800.00
146	1955	Amherst	Poultry House	600.00
147	1956	Amherst	Poultry House	800.00
148	1947	Amherst	Brooder House	100.00
151	1923	Amherst	Poultry House	500.00
152	1923	Amherst	Poultry House	500.00
153	1957	Amherst	Brooder House	100.00
154	1957	Amherst	Brooder House	100.00
155	1957	Amherst	Brooder House	100.00
157	1939	Amherst	Storage	3,000.00
158	1947	Amherst	Brooder House	5,000.00
159	1941	Amherst	Storage	1,000.00
160	1959	Amherst	Poultry House	8,000.00
163	1947	Amherst	Brooder House	100.00
164	1947	Amherst	Brooder House	100.00
165	1947	Amherst	Shelters	1,000.00

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
166	1894	Amherst	Horse Barn	$ 5,000.00
168	1885	Amherst	West Experiment Station Laboratory	27,000.00
169	1906	Amherst	Wilder Hall Classrooms	45,662.00
170	1960	Amherst	Maintenance - Physical Plant	627,000.00
171	1934	Amherst	Goodell Library	1,940,873.00
172	1960		Goodell Library - Addition	
173	1960	Amherst	Orlyte Greenhouse	500.00
177	1920	Amherst	Horticulture Shed	400.00
178	1933	Amherst	Horticulture Shed	1,254.00
179	1920	Amherst	Center Storage Shed	800.00
181	1918	Amherst	Tractor Garage	73.00
182	1911	Amherst	Brooder House	3,100.00
184	1940	Amherst	Poultry House	10,000.00
185	1918	Amherst	Tool Shed	98.00
186	1915	Amherst	Poultry House	50.00
187	1915	Amherst	Shed	100.00
188	1914	Amherst	Poultry House	1,250.00
189	1910	Amherst	Dairy Building	33,211.00
190	1910		Dairy Building	
191	1958		Silo	
192	1958	Amherst	Harvestore Silo	2,000.00
193	1941	Amherst	Barn	4,000.00
194	1910	Amherst	Machinery Shop	4,000.00
195	1928	Amherst	Farm Horse Barn	6,194.00
196	1938	Amherst	Dairy Barn	8,000.00
197	1909	Amherst	Dairy Barn	6,500.00
198	1939	Amherst	Young Stock Barn	36,837.00
199	1939	Amherst	Silo	200.00
200	1939	Amherst	Silo	200.00
201	1939	Amherst	Beef Barn Unit - Barn	5,500.00
202	1939	Amherst	Silo	200.00
203	1939	Amherst	Young Stock Hay Barn	5,000.00
204	1922	Amherst	Bull Barn	14,041.00
205	1933	Amherst	Barn	500.00
206	1927	Amherst	Sheds	50.00
207	1929	Amherst	Brooks Poultry House	200.00
209	1924	Amherst	Brooks Tobacco Shed	3,000.00
210	1957	Amherst	Brooder House	100.00
211	1958	Amherst	Poultry House	2,500.00
212	1958	Amherst	Poultry House	2,500.00
213	1951	Amherst	Comfort Station	20.00
214	1926	Waltham	Laboratory	381,000.00
215	1928		Laboratory	
216	1934		Laboratory	
217	1957		Greenhouse	
218	1924		Barn	
219	1924		Shed	
220	1924		Laboratory	
221	1924		House	
222	1924		Barns	
223	1924		Greenhouse	
224	1929		Greenhouse	
225	1950		Shed	
226	1929		Greenhouse	
227	1935		Propagating Building	
228	1959		Greenhouse	
229	1949		Administration	
230	1949		Power Supply Facility	
231	1924		Garage	
232	1924		Poultry House	
233	1952	E. Wareham	Laboratory	97,150.00
234	1957		Garage	
234	1957		Shop	
235	1926		Pumping Station	
236	1955		Laboratory	
237	1957		Greenhouse	
238	1958		Pumping Station	
239	1960		Laboratory	
240	1960		Storage	

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
241	1920	Amherst	Pomology Garage	$ 3,185.00
242	1951	Amherst	Poultry House	4,127.00
243	1958	Amherst	Poultry House	7,148.00
244	1958	Amherst	Poultry House	7,147.00
245	1950	Amherst	Poultry House	7,675.00
246	1947	Amherst	Brooder House	100.00
247	1947	Amherst	Brooder House	100.00
248	1947	Amherst	Brooder House	100.00
249	1947	Amherst	Brooder House	100.00
250	1947	Amherst	Brooder House	100.00
251	1947	Amherst	Brooder House	100.00
252	1947	Amherst	Brooder House	100.00
253	1947	Amherst	Brooder House	100.00
254	1957	Amherst	Brooder House	100.00
255	1957	Amherst	Brooder House	100.00
256	1957	Amherst	Brooder House	100.00
257	1957	Amherst	Brooder House	100.00
258	1957	Amherst	Brooder House	100.00
259	1927	Amherst	Open Corn Crib Shed	100.00
260	1927	Amherst	Open Corn Crib Shed	100.00
261	1927	Amherst	Open Corn Crib Shed	100.00
262	1927	Amherst	Open Corn Crib Shed	100.00
263	1927	Amherst	Open Corn Crib Shed	100.00
264	1927	Amherst	Open Corn Crib Shed	100.00
265	1920	So. Deerfield	House	27,950.00
268	1948		Storage	
269	1947		Storage	
270	1939		Storage	
271	1946		Storage	
273	1941		Storage	
274	1935		Storage	
275	1947		Storage	
276	1933		Storage	
278	1922	Belchertown	House	21,400.00
279	1920		Barn	
280	1920		Barn	
281	1920		Storage	
282	1920		Shed	
289	1962	Amherst	Marks Meadow - Laboratory	1,844,690.00
290	1962	Amherst	Laboratory & Classrooms - Morrill Science Center III	1,452,177.00
291	1962	Amherst	Infirmary	961,459.00
292	1962	Amherst	Cold Storage	641,191.00
293	1962	Amherst	Labs. & Classroom - Engineering & Physics	682,187.00
296	1963	Amherst	Holdsworth - Laboratory & Classroom	1,213,340.00
297	1910	Amherst	House - Bigelow	3,600.00
298	1910	Amherst	Barn - Bigelow	600.00
299	1910		Poultry House - Bigelow	
300	1910		Garage - Bigelow	
309	1910	Amherst	House - Wysocki	3,250.00
310	1910	Amherst	Barn - Wysocki	1,250.00
311	1910		Shed - Wysocki	
312	1910		Shed - Wysocki	
313	1959	Nantucket	House	3,500.00
314	1961	Nantucket	Garage	700.00
315	1959	Nantucket	Apartment	1,200.00
315	1959		Garage	
316	1953	Nantucket	Beach House	600.00
317	1963	Amherst	Classrooms & Lab. - Business Administration	1,412,091.00
318	1963	Amherst	Classrooms & Lab. - Hasbrouck Addition	1,899,019.00
319	1963	Amherst	Boyden Gymnasium	2,718,112.00
320	1949	Amherst	House - Holmes	4,000.00
321	1920		Barn - Holmes	
322	1920		Barn - Holmes	
328	1963	Hadley	Shed	600.00
329	1965	Amherst	Auditorium - Mahar	231,117.00
335	1965	Amherst	Observatory	10,000.00

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
336	1965	Amherst	Mobile Classroom	$ 8,265.00
337	1965	Amherst	Mobile Classroom	8,265.00
338	1965	Amherst	Mobile Classroom	8,265.00
339	1965	Amherst	Mobile Classroom	8,265.00
340	1965	Amherst	Mobile Classroom	8,265.00
341	1965	Amherst	Greenhouse (Orlyte)	18,664.00
342	1965	Amherst	Kiln	14,500.00
343	1966	Amherst	Classrooms and Laboratory - Engineering East	1,340,133.00
344	1966	Amherst	Classrooms and Laboratory - Chenoweth Addition	1,372,637.00
347	1966	Amherst	Classrooms and Laboratory - Morrill Science IV	3,473,955.00
358	1966	Amherst	Coal Handling Facilities	231,764.00
377	1967	Amherst	Maple Decline Laboratory	2,500.00
383	1967	Amherst	Poultry #1 Tillson	343,393.00
384	1967	Amherst	Poultry #2 Tillson	
385	1967	Amherst	Poultry #3 Tillson	
386	1967	Amherst	Poultry #4 Tillson	
387	1967	Amherst	Classrooms and Laboratory - Agricultural Engineering	320,700.00
388	1967	Amherst	Whitmore Administration	2,758,334.00
394	1920	Amherst	Dzuiba House	6,170.00
395	1920	Amherst	Dzuiba - Garage	1,980.00
396	1965	Amherst	Dzuiba - Pool	1,540.00
397	1968	Amherst	Storage - Flammable	1,337,804.00
398	1968	Amherst	Storage - Physical Plant	
398	1968	Amherst	Administration - Physical Plant	
403	1968	Amherst	Classrooms and Laboratory - Astronomy	205,000.00
404	1968	Amherst	Tillson Shed - Sheep	11,000.00
405	1968	Amherst	Administration - Thompson	2,728,640.00
406	1968	Amherst	Classrooms and Laboratory - Herter	3,428,448.00
407	1925	Amherst	House - Dickinson	12,920.00
408	1925	Amherst	Garage - Dickinson	1,370.00
409	1968	Amherst	Sawmill - Tillson	8,000.00
410	1968	E. Wareham	Laboratory and Classroom - Biology	-0-
412	1971	Amherst	Graduate Research Center	14,441,687.00
413	1970	Amherst	Student Union - Lincoln Center	-0-
414	1970	Amherst	Garage Parking - Campus Center	-0-
422	1968	Amherst	Storage - Lumber - Physical Plant	10,000.00
423	1968	Amherst	Tank - Water	75,000.00
424	1928	Amherst	House - McIntire	12,100.00
425	1958	Amherst	House - Waskiewicz	8,000.00
426	1971	Amherst	Dormitory - Brown	-0-
427	1971	Amherst	Dormitory - Cashin	-0-
428	1971	Amherst	Dormitory - McNamara	-0-
429	1971	Amherst	Switchgear Building	75,000.00
430	1969	Amherst	Guard House - Traffic Control #1	4,000.00
431	1969	Amherst	Guard House - Traffic Control #2	4,000.00
432	1969	Amherst	Guard House - Traffic Control #3	4,000.00
433	1969	Amherst	Guard House - Traffic Control #4	4,000.00
434	1969	Amherst	Guard House - Traffic Control #5	4,000.00
435	1969	Amherst	Guard House - Traffic Control #6	4,000.00
443	1971	Amherst	Storage - Sand & Salt	7,000.00
445	1971	Amherst	Apartment Building - N. Village	-0-
446	1971	Amherst	Apartment Building	-0-
447	1971	Amherst	Apartment Building	-0-
448	1971	Amherst	Apartment Building	-0-
449	1971	Amherst	Apartment Building	-0-
450	1971	Amherst	Apartment Building	-0-
451	1971	Amherst	Apartment Building	-0-
452	1971	Amherst	Apartment Building	-0-
453	1971	Amherst	Apartment Building	-0-
454	1971	Amherst	Apartment Building	-0-
455	1971	Amherst	Apartment Building	-0-
456	1971	Amherst	Apartment Building	-0-
457	1971	Amherst	Apartment Building	-0-
458	1971	Amherst	Apartment Building	-0-
459	1971	Amherst	Apartment Building	-0-
460	1971	Amherst	Apartment Building	-0-
461	1971	Amherst	Apartment Building	-0-

Schedule G-2 (Continued)

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
462	1971	Amherst	Apartment Building - N. Village	-0-
463	1971	Amherst	Apartment Building	-0-
464	1971	Amherst	Apartment Building	-0-
465	1971	Amherst	Apartment Building	-0-
466	1971	Amherst	Apartment Building	-0-
467	1971	Amherst	Apartment Building	-0-
468	1971	Amherst	Apartment Building	-0-
469	1971	Amherst	Apartment Building	-0-
470	1971	Amherst	Apartment Building	-0-
471	1971	Amherst	Apartment Building	-0-
472	1971	Amherst	Apartment Building	-0-
473	1971	Amherst	Apartment Building	-0-
474	1971	Amherst	Apartment Building	-0-
475	1971	Amherst	Apartment Building	-0-
476	1971	Amherst	Apartment Building	-0-
477	1971	Amherst	Apartment Building	-0-
478	1971	Amherst	Apartment Building	-0-
479	1971	Amherst	Apartment Building	-0-
480	1971	Amherst	Apartment Building	-0-
481	1971	Amherst	Apartment Building	-0-
482	1971	Amherst	Apartment Building	-0-
483	1971	Amherst	Apartment Building	-0-
484	1971	Amherst	Apartment Building	-0-
485	1971	Amherst	Apartment Building	-0-
486	1971	Amherst	Apartment Building	-0-
487	1971	Amherst	Apartment Building	-0-
488	1971	Amherst	Apartment Building	-0-
489	1971	Amherst	Apartment Building	-0-
490	1971	Amherst	Apartment Building	-0-
491	1971	Amherst	Apartment Building	-0-
492	1971	Amherst	Apartment Building	-0-
493	1971	Amherst	Apartment Building	-0-
494	1971	Amherst	Apartment Building	-0-
496	1971	Hadley	Sewerage Facility	20,000.00
497	1971	Amherst	Package Boiler Plant	471,000.00
			Total	$74,116,167.00

Schedule G-3

Inventory of Improvements Other Than Buildings

	Book Value June 30, 1971
Roads, Sidewalks and Parking Areas	$ 3,026,671.88
Sewer, Water and Drainage System	2,124,435.46
Steam Lines	4,958,015.05
Electric Lines	4,269,004.97
Tennis Court	90,894.25
Playing Fields	1,082,678.12
Coal Handling	444,852.43
Total	$15,996,552.16

UNIVERSITY OF MASSACHUSETTS

at Boston

Schedule A-11

Comparative Statement of Funds Forwarded to State Treasurer

on Account of Income from Fees, Sales and Services

	1969		1970		1971	
Instruction						
Tuition - Boston	$617,967.50		$674,815.45		$762,779.69	
Tuition - Summer School Boston	53,276.00		41,247.00		79,160.00	
Total		$671,243.50		$716,062.45		$841,939.69

Schedule A-12

State Appropriations

Comparative Statement by Subsidiary Accounts

Subsidiary Account		1969	1970	1971
General Maintenance				
7416-1001-01	Salaries, Permanent Positions	$2,554,000.00	$ 4,054,479.00	$5,078,765.00
7416-1001-02	Salaries, Other	518,000.00	15,000.00	20,000.00
7416-1001-03	Services, Non-Employees	755,000.00	770,000.00	1,048,900.00
7416-1001-04	Food for Persons	-0-	-0-	-0-
7416-1001-05	Clothing	-0-	-0-	-0-
7416-1001-06	Housekeeping Supplies and Expenses	1,500.00	1,500.00	1,590.00
7416-1001-07	Laboratory, Medical and General Care	3,000.00	3,000.00	3,180.00
7416-1001-08	Heat and Other Plant Operations	80,000.00	75,500.00	96,000.00
7416-1001-09	Farm and Grounds	-0-	-0-	-0-
7416-1001-10	Travel and Automotive Expenses	20,000.00	17,500.00	19,900.00
7416-1001-11	Advertising and Printing	20,000.00	40,500.00	42,000.00
7416-1001-12	Repairs, Alterations and Additions	25,000.00	36,000.00	50,000.00
7416-1001-13	Special Supplies and Expenses	213,000.00	165,000.00	244,000.00
7416-1001-14	Office and Administrative Expenses	80,000.00	79,000.00	111,000.00
7416-1001-15	Equipment	172,500.00	240,000.00	258,400.00
7416-1001-16	Rentals	922,000.00	996,500.00	1,177,100.00
	Total	$5,364,000.00	$ 6,493,979.00	$8,150,835.00
Other Maintenance				
7416-4011-13	Library	$ 100,000.00	$ 500,000.00	$ 100,000.00
7416-2000-03	Disadvantaged Students	-0-	45,700.00	37,400.00
7416-2000-10	Disadvantaged Students	-0-	300.00	-0-
7416-2000-13	Disadvantaged Students	-0-	94,000.00	102,600.00
7416-9102-12	Renovations	-0-	275,000.00	-0-
	Total	$ 100,000.00	$ 915,000.00	$ 240,000.00
Capital Outlay				
7490-0064-00	Renovation and Improvements	$1,510,000.00	$ -0-	$ -0-
7490-0065-00	Library Books	250,000.00	-0-	-0-
7490-0107-00	Design and Construction of New Campus	-0-	8,200,000.00	-0-
	Total	$1,760,000.00	$ 8,200,000.00	$ -0-
	Grand Total	$7,224,000.00	$15,608,979.00	$8,390,835.00

Authorized by Chapter 480 of the Acts of 1970, also Chapter 833 of the Acts of 1970 and Chapter 427 of the Acts of 1971.

Schedule A-13

State General Maintenance Appropriations

Summary of Expenditures by Functional Division and Subsidiary Accounts

Account Number and Name		Appropriation and Allotment	Expenditures and Encumbrances Administration	Instruction	Operation of Plant	Total Expenditures and Encumbrances	Reverted to State Treasurer	Balance of Appropriations June 30, 1971
General Maintenance								
7416-1001-01	Salaries, Permanent Positions	$5,078,765.00	$ 615,278.25	$4,376,290.54	$ 82,938.17	$5,074,506.96	$ 4,258.04	-0-
7416-1001-02	Salaries, Other	20,000.00	3,721.71	696.95	14,850.85	19,269.51	730.49	-0-
7416-1001-03	Services, Non-Employee	1,048,900.00	256,131.34	479,521.59	312,363.71	1,048,016.64	883.36	-0-
7416-1001-06	Housekeeping Supplies & Expenses	1,590.00	132.66	101.25	1,353.67	1,587.58	2.42	-0-
7416-1001-07	Laboratory, Medical, General Care	3,180.00	79.68	3,099.44	-0-	3,179.12	.88	-0-
7416-1001-08	Heat & Other Plant Operations	96,000.00	1,450.00	-0-	94,534.00	95,984.00	16.00	-0-
7416-1001-10	Travel & Automotive Expenses	19,900.00	22,443.07	5,056.13	(7,600.00)	19,899.20	.80	-0-
7416-1001-11	Advertising & Printing	42,000.00	26,170.47	15,636.11	158.80	41,965.38	34.62	-0-
7416-1001-12	Repairs, Alterations & Additions	50,000.00	12,884.06	4,574.78	32,347.29	49,806.13	193.87	-0-
7416-1001-13	Special Supplies & Expenses	244,000.00	75,870.94	167,142.95	380.21	243,394.10	605.90	-0-
7416-1001-14	Office & Administrative Expenses	111,000.00	105,772.23	4,722.40	283.47	110,778.10	221.90	-0-
7416-1001-15	Equipment	258,400.00	66,508.05	164,861.91	26,881.75	258,251.71	148.29	-0-
7416-1001-16	Rental	1,177,100.00	1,169,892.61	6,245.87	720.70	1,176,859.18	240.82	-0-
	Total	$8,150,835.00	$2,356,335.07	$5,227,949.92	$559,212.62	$8,143,497.61	$ 7,337.39	-0-
Other Maintenance								
7416-4011-13	Library	$ 100,000.00	-0-	$ 99,997.99	-0-	$ 99,997.99	$ 2.01	-0-
7416-2000-03	Disadvantaged Students	37,400.00	-0-	35,850.13	-0-	35,850.13	1,549.87	-0-
7416-2000-13	Disadvantaged Students	102,600.00	-0-	101,324.00	-0-	101,324.00	1,276.00	-0-
	Total	$ 240,000.00	-0-	$ 237,172.12	-0-	$ 237,172.12	$ 2,827.88	-0-
	Grand Total	$8,390,835.00	$2,356,335.07	$5,465,122.04	$559,212.62	$8,380,669.73	$10,165.27	-0-

Schedule A-14

06/30/71 FISCAL YEAR EXPENDITURE REPORT BY DEPT IN BUDGET DIVISION

DEPT	DESCRIPTION	STATE FUNDS (01-03)	STATE FUNDS (04-18)	OTHER FUNDS	NET TOTALS
C	OFFICE OF THE CHANCELLOR				
C05	OFFICE OF PRESIDENT-BOSTON	192,976.79	21,541.24	101,390.93	315,908.96
C10	DEAN OF FACULTY	57,100.33	1,770.30	449.60	59,320.23
C11	ADMISSIONS	77,575.65	17,113.27	15,650.81	110,339.73
C12	SPECIAL ADMISSIONS	23,629.06	361.09	14,427.50	38,417.65
C13	REGISTRAR	110,739.13	19,135.72	8,156.18	138,031.03
C14	TEACHER CERTIFICATION PROGRAM	44,061.64	971.61	1,517.75	46,551.00
C15	AUDIO VISUAL CENTER	31,399.56	629.46	6,763.17	38,792.19
C16	SUMMER SCHOOL	1,375.00	62.52	.00	1,437.52
C20	OFFICE OF THE VICE CHANCELLOR	78,892.78	5,014.00	.00	83,906.78
C21	DIRECTOR OF PLANNING & DEVELOPMENT	63,295.57	13,259.37	451.00	77,005.94
C22	DIRECTOR OF PHYSICAL PLANT	.00	67.19	.00	67.19
C23	BUSINESS & FINANCIAL MANAGEMENT	109,307.34	1,376,325.16	860.44	1,486,492.94
C24	BURSAR	25,761.84	535.88	.00	26,297.72
C25	PERSONNEL	22,705.20	2,857.76	.00	25,562.96
C26	COLLEGE SUPPLY	36,311.41	21,559.20	4,850.56	62,721.17
C40	OFFICE OF DIRECTOR OF STUDENT AFFAIRS	55,586.24	5,447.87	7,783.77	68,817.88
C41	HEALTH SERVICES	431.92	3,264.64	70,090.37	73,786.93
C42	STUDENT ACTIVITIES	75.09	488.55	23,893.48	24,457.12
C43	CAREER COUNSELING & PLACEMENT	53,176.03	2,368.58	8,770.75	64,315.36
C44	FINANCIAL AID	23,213.37	254.31	1,026.60	24,494.28
C45	COUNSELING	62,635.16	583.49	25,421.04	88,639.69
C46	UPWARD BOUND	7,180.20	74.53	42,704.79	49,959.52
C48	WORK STUDY OFF CAMPUS	.00	.00	40,695.44	40,695.44
C50	LIBRARY	283,528.82	95,395.21	14,706.86	393,630.89
C61	ART DEPARTMENT	87,094.54	13,235.95	1,671.14	102,001.63
C62	ENGLISH DEPARTMENT	725,829.90	4,390.64	27,849.77	758,070.31
C63	GERMAN DEPARTMENT	114,958.95	507.86	4,368.25	119,835.06
C64	MUSIC DEPARTMENT	72,334.38	7,816.47	3,065.45	83,216.30
C65	FRENCH DEPARTMENT	278,745.25	359.47	75.20	279,179.92
C66	ITALIAN DEPARTMENT	48,260.12	304.07	.00	48,564.19
C67	SPANISH DEPARTMENT	182,283.86	299.05	3,504.68	186,087.59
C68	RUSSIAN DEPARTMENT	36,309.97	371.57	.00	36,681.54
C69	CLASSICS DEPARTMENT	69,438.67	315.03	.00	69,753.70
C70	PHILOSOPHY DEPARTMENT	72,436.53	373.64	1,825.75	74,635.92
C71	THEATRE ARTS	20,486.04	1,926.93	.00	22,412.97
C76	PHYSICS DEPARTMENT	276,650.58	59,491.34	10,585.95	346,727.87
C77	CHEMISTRY DEPARTMENT	281,403.90	71,439.28	34,953.66	387,796.84
C78	BIOLOGY DEPARTMENT	396,998.75	74,705.03	25,295.66	496,999.44
C81	ECONOMICS DEPARTMENT	144,239.07	12,275.05	4,500.35	161,014.47
C82	POLITICS DEPARTMENT	179,130.49	1,610.20	546.80	181,287.49
C83	HISTORY DEPARTMENT	506,682.65	1,887.39	4,735.75	513,305.79
C84	PSYCHOLOGY DEPARTMENT	278,255.25	3,638.27	8,880.45	290,773.97
C85	SOCIOLOGY & ANTHROPOLOGY	224,607.39	1,096.26	2,842.28	228,545.93
C90	MATHEMATICS DEPARTMENT	374,535.96	7,520.16	3,388.08	385,444.20
C91	PLANT	410,152.73	149,059.89	3,143.50	562,356.12
	C TOTALS	6,141,793.11	2,001,704.50	530,843.76	8,674,341.37

Schedule A-15

Capital Outlay Expenditures and Balances

Account Number and Name		Expires	Total Appropriation	Expenditures Prior Year	Expenditures Current Year	Reverted to State Treasurer	Balance
7490-0083-00	Boston Loan	1971	$ 2,700,000.00	$2,699,886.12	$ -0-	$3.88	$ 110.00
7490-0051-00	Renovation and Improvements	1972	750,000.00	719,098.35	27,211.44	-0-	3,690.21
7490-0064-00	Renovation and Improvements	1973	1,510,000.00	1,436,220.05	57,877.69	-0-	15,902.26
7490-0065-00	Library Books	1973	250,000.00	249,999.86	-0-	-0-	.14
7490-0107-00	Campus Design and Construction	1974	8,200,000.00	1,797,437.56	27,580.32	-0-	6,374,982.12
7416-9102-12	Renovation and Improvements	1971	275,000.00	-0-	274,999.35	.65	-0-
	Total		$13,685,000.00	$6,902,641.94	$387,668.80	$4.53	$6,394,684.73

Schedule A-16

Capital Outlay Appropriations

Under Supervision and Control of the

Bureau of Building Construction

8071-66	For the construction of phase I of the Columbia Point campus, including academic building 010, academic building 020, natural science building 080, laboratory building 090, administration building 110, central supply and maintenance building 150, central chilling plant 160, and the cost of furnishings and equipment; to be in addition to the amount appropriated in item 7490-0102 of section two of chapter eight hundred and ninety-eight of the acts of nineteen hundred and sixty-nine; total project cost, including construction escalation costs not to exceed three hundred fifty million dollars; provided, that no construction of buildings from funds made available herein shall proceed until critical analysis of the methane gas and other related site problems have been made by three independent qualified, disinterested, technical consultants; and, further provided, that copies of said analyses shall be filed with the house and senate committees on ways and means fifteen days before proceeding with construction	$80,000,000

Authorized by Chapter 633 of the Acts of 1970

Schedule C-6

Statement of Endowment Fund Principal

Name of Fund	Balance July 1, 1970	Additions	Disbursements	Balance June 30, 1971
Endowments				
Brian Rattigan	$ 481.56	$441.55	-0-	$ 923.11
John W. Ryan Faculty Convocation Award	872.91	-0-	-0-	872.91
Total	$1,354.47	$441.55	-0-	$1,796.02

Schedule C-7

Endowment Income

Statement of Receipts, Disbursements and Balances

Name and Purpose of Fund	Balance July 1, 1970	Receipts from Investments	Disbursements	Balance June 30, 1971
Prizes:				
Brian Rattigan	$ -0-	$ 27.07	$ -0-	$ 27.07
Miscellaneous Purposes:				
John W. Ryan Faculty Convocation Award	54.86	44.28	50.00	49.14
Total	$ 54.86	$ 71.35	$ 50.00	$ 76.21

Schedule D-2

Statement of Student Loan Fund

Received from Student Activities Office - Amherst	$5,800.00	
Received from Student Activities Office - Boston	1,000.00	
		$6,800.00
Less Uncollected Loans Cancelled		2,554.67
Funds Available		$4,245.33
Loans Outstanding	$4,245.33	
		$4,245.33

Schedule F-19

UNIVERSITY OF MASSACHUSETTS AT BOSTON
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 05 SCHOLARSHIPS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
IBTW LOCAL 1 SCHOLARSHIP	B 018600	.00	40,000.00	.00	20,000.00	20,000.00	C44
UNIVERSITY SCHOLARSHIP/BOSTON	B 023102	10.00	5,000.00	.00	4,900.00	110.00	C44
SECT-05 SCHOLARSHIPS		10.00	45,000.00	.00	24,900.00	20,110.00	

SECTION 06 AUXILIARY ENTERPRISES

BOSTON FOOD SERVICE	B 026004	9,526.60	1,945.92	.00	1,291.05	10,181.47	C23
BOSTON BOOK SHOP	B 026020	.00	3,346.24	9,925.04	6,317.59	6,953.69	C39
BOOK SHOP PETTY CASH/CONTRA	B 026021	.00	.00	.00	2,500.00CR	2,500.00	C39
UNIVERSITY UNION TRUST FUND	B 026030	.00	.00	.00	.00	.00	C2[illegible]
STUDENT HEALTH SERVICE BOSTON	B 038502	17,512.01	100,219.25	604.08CR	104,284.22	12,842.96	C41
SECT-06 AUXILIARY ENTERPRISES		27,038.61	105,511.41	9,320.96	109,392.86	32,478.12	

SECTION 07 CLEARING ACCOUNT

PETTY CASH BOSTON-CONTRA	B 034802	.00	.00	500.00	.00	500.00	C24
UNIVERSITY OF MASS BOSTON DEPOSIT	B 040800	8,694.20	320,933.96	.00	329,486.16	142.00	C24
SECT-07 CLEARING ACCOUNT		8,694.20	320,933.96	500.00	329,486.16	642.00	

Schedule F-19 (Continued)

UNIVERSITY OF MASSACHUSETTS AT BOSTON
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 08 GENERAL PURPOSE FUND

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
08/01 UNRESTRICTED CURRENT FUNDS							
BIOLOGY SUMMER FIELD PROGRAM/BOSTON	B 025610	.00	.00	.00	.00	.00	C78
LAB FEE-U. MASS. BOSTON	B 032604	.00	.00	.00	.00	.00	C20
MINOT COMPUTER TRUST	B 033410	200.00	.00	.00	138.08	61.92	C81
PRE REGISTRATION FEE BOSTON	B 035000	31,386.71	24,390.00	494.12CR	19,610.05	35,672.54	C40
TRUST FUND INTEREST BOSTON	B 040505	7,700.00	.00	1,370.00	4,210.50	4,859.50	C20
UNIVERSITY FUND/BOSTON	B 040710	.00	870.00	2,000.00	1,662.96	1,207.04	C01
XEROX PRIZE BOSTON	B 041302	.00	.00	.00	.00	.00	C20
08/01 UNRESTRICTED CURRENT FUNDS	TOTALS	39,286.71	25,260.00	2,875.88	25,621.59	41,801.00	
08/03 OPERATING ACCOUNTS							
RESEARCH TRUST FUND BOSTON	B 035515	25,200.00	6.45	24,413.98	12,431.66	37,188.77	C20
UPWARD BOUND BOSTON 1967	B 041130	918.51	.00	.00	.00	918.51	C01
UPWARD BOUND BOSTON 1968	B 041140	2,366.76	.00	.00	.00	2,366.76	C01
UPWARD BOUND BOSTON 1969	B 041160	.00	.00	.00	.00	.00	C01
UPWARD BOUND BOSTON 1970	B 041170	3,097.42	.00	190.91	.00	3,288.33	C01
08/03 OPERATING ACCOUNTS	TOTALS	31,582.69	6.45	24,604.89	12,431.66	43,762.37	
SECT-08 GENERAL PURPOSE FUND		70,869.40	25,266.45	27,480.77	38,053.25	85,563.37	

SECTION 09 GIFTS & GRANTS PENDING TRUSTEE ACTION

RICHARD T HOGAN MEMORIAL/BOSTON	B 032595	.00	4,223.52	.00	300.00	3,923.52	C20
SECT-09 GIFTS & GRANTS PENDING TRUSTEE ACTION		.00	4,223.52	.00	300.00	3,923.52	

UNIVERSITY OF MASSACHUSETTS AT BOSTON
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 12 STUDENT PROGRAMS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
COMMENCEMENT FUND BOSTON	B 026901	6,343.95	7,470.00	.00	6,047.41	7,766.54	C10
SUMMER PROGRAM BOSTON	B 037800	.00	.00	.00	.00	.00	C20
STUDENT ACTIVITIES BOSTON	B 038400	50,757.94	133,594.29	255.00	133,945.14	50,662.09	C42
YEAR OF STUDY IN FRANCE	B 041210	24,192.40	.00	.00	.00	24,192.40	C65
YEAR OF STUDY IN FRANCE 1970	B 041211	9,094.00	.00	.00	.00	9,094.00	C65
YEAR OF STUDY IN FRANCE 70/71	B 041213	4,800.00	32,800.00	7,660.00	45,260.00	.00	C65
SECT-12 STUDENT PROGRAMS		95,188.29	173,864.29	7,915.00	185,252.55	91,715.03	

SECTION 13 SPONSORED RESEARCH

MERK AND COMPANY	B 051540	.00	1,000.40	.00	864.22	136.18	C77
SECT-13 SPONSORED RESEARCH		.00	1,000.40	.00	864.22	136.18	

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS

AMERICAN CANCER SOCIETY PS50	B 043001	463.68CR	2,678.00	2,252.08	4,466.40	.00	C01
BOSTON CITY SCHOOL COMMITTEE/BOSTON	B 043450	.00	3,300.00	.00	1,970.00	1,330.00	C85
RESEARCH CORP COTTRELL SCHWARTZ	B 046800	2,525.66	.00	.00	2,017.02	508.64	C77
FORD FOUNDATION #700-0448 / BOSTON	B 048606	.00	178,908.00	11,406.15CR	115,695.10	51,806.75	C01
PETROLEUM RES FD 1833 G2,3	B 054350	2,275.00	2,500.00	.00	3,019.10	1,755.90	C77
PRF 2118-G2-BOSTON	B 054355	.00	2,500.00	.00	1,013.47	1,486.53	C77
ALFRED P SLOAN BR1193	B 057406	10,700.06	.00	254.04CR	8,426.98	2,019.04	C77
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS		15,037.04	189,886.00	9,408.11CR	136,608.07	58,906.86	

Schedule F-19 (Continued)

UNIVERSITY OF MASSACHUSETTS AT BOSTON
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 16 FEDERAL GRANTS AND CONTRACTS TRAINING

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
16/04 EDUCATION OEG 0-70-3892	B 069218	777.50CR	100,062.00	241.25CR	90,678.69	8,364.56	C46
16/04 EDUCATION	TOTALS	777.50CR	100,062.00	241.25CR	90,678.69	8,364.56	
SECT-16 FEDERAL GRANTS AND CONTRACTS TRAINING		777.50CR	100,062.00	241.25CR	90,678.69	8,364.56	

SECTION 18 FEDERAL GRANTS AND CONTRACTS EQUIPMENT

18/01 NATIONAL INSTITUTE OF HEALTH 04-058385	B 070102	.00	.00	36,334.30	36,334.30	.00	C78
18/01 NATIONAL INSTITUTE OF HEALTH	TOTALS	.00	.00	36,334.30	36,334.30	.00	
18/02 NATIONAL SCIENCE FOUNDATION GB 27982	B 091704	.00	.00	.00	.00	.00	C78
18/02 NATIONAL SCIENCE FOUNDATION	TOTALS	.00	.00	.00	.00	.00	
18/04 OFFICE OF EDUCATION OEG 0-70-5822 (314)	B 068510	.00	5,395.00	.00	5,395.00	.00	C50
18/04 OFFICE OF EDUCATION	TOTALS	.00	5,395.00	.00	5,395.00	.00	
SECT-18 FEDERAL GRANTS AND CONTRACTS EQUIPMENT		.00	5,395.00	36,334.30	41,729.30	.00	

SECTION 19 FEDERAL GRANTS CONTRACTS OTHER PURPOSES

OEO UB BOSTON 68-69	B 069803	.00	.00	.00	.00	.00	C46
UB BOSTON 69-70	B 069804	6,138.06	285.00	190.91CR	6,232.15	.00	C46
SECT-19 FEDERAL GRANTS CONTRACTS OTHER PURPOSES		6,138.06	285.00	190.91CR	6,232.15	.00	

UNIVERSITY OF MASSACHUSETTS AT BOSTON
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
20/01 NATIONAL INSTITUTE HEALTH							
NB 08573-01	B 081501	.00	.00	9,070.54	9,070.54	.00	C94
GM-13558-05	B 082505	.00	99.76	6,029.54	6,129.30	.00	C78
GM-13689-04	B 082604	.00	.00	4,870.01	4,870.01	.00	C77
NIH GM 13689-05/BOSTON	B 082605	.00	.00	7,888.78	7,888.78	.00	C77
GM-15538-03	B 083003	.00	.00	3,417.39	3,417.39	.00	C77
20/01 NATIONAL INSTITUTE HEALTH	TOTALS	.00	99.76	31,276.26	31,376.02	.00	
20/02 NATIONAL SCIENCE FOUNDATION							
GP 5646	B 088202	.00	.00	.00	.00	.00	C76
GB 7462	B 088360	.00	.00	5,163.16	5,163.16	.00	C78
GP 8314	B 088513	.00	.00	5,207.02	5,207.02	.00	C77
GP 12393	B 089603	.00	.00	.00	.00	.00	C62
GP 11281	B 089804	.00	.00	3,232.68	3,232.68	.00	C90
NSF GP 12393	B 089903	.00	.00	2,971.33	2,971.33	.00	C76
NSF GP 12533	B 089913	.00	.00	6,209.68	6,209.68	.00	C76
GB 15767	B 090021	.00	.00	10,550.15	10,550.15	.00	K73
GP 29705	B 091725	.00	.00	.00	.00	.00	C76
20/02 NATIONAL SCIENCE FOUNDATION	TOTALS	.00	.00	33,334.02	33,334.02	.00	
20/04 AIR FORCE							
AF F19628-71-C-0161	B 060706	.00	.00	1,500.00	1,402.80	97.20	C76
20/04 AIR FORCE	TOTALS	.00	.00	1,500.00	1,402.80	97.20	
20/05 ARMY							
DA 31-124-ARO-D-412	B 064000	.00	.00	.00	.00	.00	C77
20/05 ARMY	TOTALS	.00	.00	.00	.00	.00	
20/12 OTHER							
COMMUNITY SERVICE 68-025-001	B 065103	1,881.18CR	2,135.53	116.58CR	137.77	.00	C82
20/12 OTHER	TOTALS	1,881.18CR	2,135.53	116.58CR	137.77	.00	

Schedule F-19 (Continued)

UNIVERSITY OF MASSACHUSETTS AT BOSTON
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH CONTINUED

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
SECT-20 FEDERAL GRANTS AND CONTRACTS-RESEARCH		1,881.18CR	2,235.29	65,993.70	66,250.61	97.20	

SECTION 21 AGENCY FUNDS

PRUDENTIAL INSURANCE ACCOUNT BOSTON	B 097200	2,882.00	360,182.50	.00	350,709.00	12,355.50	C24
SECT-21 AGENCY FUNDS		2,882.00	360,182.50	.00	350,709.00	12,355.50	

SUMMARY OF ALL SECTIONS

SECT-05 SCHOLARSHIPS	10.00	45,000.00	.00	24,900.00	20,110.00
SECT-06 AUXILIARY ENTERPRISES	27,038.61	105,511.41	9,320.96	109,392.86	32,478.12
SECT-07 CLEARING ACCOUNT	8,694.20	320,933.96	500.00	329,486.16	642.00
SECT-08 GENERAL PURPOSE FUND	70,869.40	25,266.45	27,480.77	38,053.25	85,563.37
SECT-09 GIFTS & GRANTS PENDING TRUSTEE ACTION	.00	4,223.52	.00	300.00	3,923.52
SECT-12 STUDENT PROGRAMS	95,188.29	173,864.29	7,915.00	185,252.55	91,715.03
SECT-13 SPONSORED RESEARCH	.00	1,000.40	.00	864.22	136.18
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS	15,037.04	189,886.00	9,408.11CR	136,608.07	58,906.86
SECT-16 FEDERAL GRANTS AND CONTRACTS TRAINING	777.50CR	100,062.00	241.25CR	90,678.69	8,364.56
SECT-18 FEDERAL GRANTS AND CONTRACTS EQUIPMENT	.00	5,395.00	36,334.30	41,729.30	.00
SECT-19 FEDERAL GRANTS CONTRACTS OTHER PURPOSES	6,138.06	285.00	190.91CR	6,232.15	.00
SECT-20 FEDERAL GRANTS AND CONTRACTS-RESEARCH	1,881.18CR	2,235.29	65,993.70	66,250.61	97.20
SECT-21 AGENCY FUNDS	2,882.00	360,182.50	.00	350,709.00	12,355.50
TOTALS FOR TRUST FUNDS-- SECTIONS 03-05	10.00	45,000.00	.00	24,900.00	20,110.00
TOTALS FOR TRUST FUNDS-- SECTIONS 06-20	220,306.92	928,663.32	137,704.46	1,004,847.86	281,826.84
TOTALS FOR TRUST FUNDS-- SECTIONS 03-20	220,316.92	973,663.32	137,704.46	1,029,747.86	301,936.84
GRAND TOTALS FOR TRUST AND AGENCY FUNDS	223,198.92	1,333,845.82	137,704.46	1,380,456.86	314,292.34

Schedule F-20

Campus Center - University Store - Boston

Income Statement For The Fiscal Year Ended
June 30, 1971

Sales		
Books	$274,855.21	
Supplies	40,762.00	
		$315,617.21
Cost of Goods Sold		
Beginning Inventory	$ 69,960.00	
Purchases	337,322.37	
Freight In	6,215.37	
	413,497.74	
Less: Purchase Returns & Allowances	79,979.22	
	333,518.52	
Less: Purchase Discounts	17.74	
	333,500.78	
Less: Ending Inventory	77,947.00	
		255,553.78
Gross Profit on Sales		$ 60,063.43
Operating Expenses		
Payroll - Regular	$ 26,821.41	
Payroll - Student	8,307.40	
Payroll - Hourly	7,519.08	
Employees' Group Insurance	773.83	
Insurance	-0-	
Office Supplies	768.15	
Store Supplies	1,454.46	
Telephone and Telegraph	195.64	
Postage	537.79	
Advertising	18.62	
Travel and Education	225.79	
Doubtful Accounts	163.47	
Repairs and Maintenance	897.81	
Utilities	-0-	
Depreciation	-0-	
Cash Shortages	518.66	
Miscellaneous	628.18	
Outside Labor	2,283.66	
		51,113.95
Net Income (Loss) from Operations		$ 8,949.48
Other Income		
Laboratory Fee Commissions	-0-	
Xerox and Duplicating	1,117.45	
Cash Overages	87.13	
Miscellaneous	44.23	
		1,248.81
		$ 10,198.29
Other Expenses		
Transfer to General Fund	-0-	
Xerox Service Expenses	1,262.82	
Transfer to Reserve Fund	-0-	
		1,262.82
Net Income (Loss) for Period		$ 8,935.47

Schedule F-21

Campus Center - University Store - Boston

Balance Sheet As Of
June 30, 1971

ASSETS		
Current Assets:		
Cash in Bank		$ 22,164.13
Cash on Hand		12,500.00
Petty Cash		-0-
Cash in Transit		-0-
Accounts Receivable		11,660.86
Accounts Receivable - Book Vendors		60,467.37
Accounts Receivable - Supply Vendors		1,759.52
Inventory - Books		70,207.00
Inventory - Supplies		7,740.00
Prepaid Expenses		315.00
Total Current Assets		$186,813.88
Fixed Assets:		
Store Furniture and Fixtures	$16,885.23	
Less: Accumulated Depreciation	1,279.05	
		$ 15,606.18
Machinery and Equipment	$ 4,468.37	
Less: Accumulated Depreciation	140.83	4,327.54
Total Assets		$206,747.60
LIABILITIES AND CAPITAL		
Current Liabilities:		
Accounts Payable		$ 16,867.99
Accrued Payroll		-0-
Accrued Taxes - Mass. Sales Tax		36.55
Total Current Liabilities		$ 16,904.54
Long-term Liabilities:		
University Store - Amherst Campus		$163,326.23
Capital:		
Retained Earnings		$ 26,516.83
Total Liabilities and Capital		$206,747.60

Schedule G-4

Inventory of Land

Location	Acreage	Assessed Valuation June 30, 1971
Boston	.4	$ 315,900.00
Columbia Point	192.8	1,753,640.00
Total	193.2	$2,069,540.00

Schedule G-5

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
393	1926	Boston	Classrooms and Laboratory	$1,484,100.00
			Total	$1,484,100.00

UNIVERSITY OF MASSACHUSETTS

at Worcester

Schedule A-17

Comparative Statement of Funds Forwarded to State Treasurer

on account of Income from Fees, Sales and Services

Instruction	
Tuition - Medical School	$8,067.50
Operation of Plant	
Rent - Worcester	1,125.00
	$9,192.50

Schedule A-18

State Appropriations

Comparative Statement by Subsidiary Account

Subsidiary Account		1969	1970	1971
General Maintenance				
7411-1005-01	Salaries, Permanent Positions	$292,081.60	$401,763.85	$1,130,751.18
7411-1005-02	Salaries, Other	15,168.12	182,532.16	97,092.93
7411-1005-03	Services, Non-Employees	97,783.83	157,955.37	329,614.62
7411-1005-04	Food for Persons	-0-	-0-	-0-
7411-1005-05	Clothing	-0-	-0-	-0-
7411-1005-06	Housekeeping Supplies and Expenses	700.00	1,652.88	6,008.07
7411-1005-07	Laboratory, Medical and General Care	-0-	-0-	-0-
7411-1005-08	Heat and Other Plant Operations	9,000.00	10,215.79	26,748.53
7411-1005-09	Farm and Grounds	500.00	-0-	500.00
7411-1005-10	Travel and Automotive Expenses	18,711.68	26,064.77	22,132.34
7411-1005-11	Advertising and Printing	10,940.55	30,603.91	14,275.71
7411-1005-12	Repairs, Alterations and Additions	8,274.44	2,679.62	40,822.95
7411-1005-13	Special Supplies and Expenses	18,247.55	41,409.85	179,867.16
7411-1005-14	Office and Administrative Expenses	13,543.39	16,219.63	40,619.26
7411-1005-15	Equipment	15,066.56	31,220.23	48,155.08
7411-1005-16	Rental	1,000.00	7,235.15	29,709.94
	Total	$481,017.72	$909,553.21	$1,966,297.77
Other Maintenance				
1350-38-00	Miscellaneous	$ 57,284.65	$ -0-	$ -0-
7411-1008-00	Library Books	-0-	70,000.00	-0-
	Total	$ 57,284.65	$ 70,000.00	$ -0-
Capital Outlay				
7490-0067-00	Library Books	$230,000.00	$ -0-	$ -0-
	Grand Total	$768,302.37	$979,553.21	$1,966,297.77

Authorized by Chapter 480 of the Acts of 1970 and Chapter 833 of the Acts of 1970.

Schedule A-19

Capital Outlay Appropriations

Under Supervision and Control of the

Bureau of Building Construction

University of Massachusetts Medical School

8071-64	For the purchase and installation of certain equipment for the H. B. Shaw building for the medical school in the city of Worcester; total project cost not to exceed one million nine hundred thousand dollars	$ 600,000
0871-86	For the acquisition of certain land in the city of Worcester for a site for the medical school or land with buildings thereon, by purchase or by eminent domain under chapter seventy-nine of the General Laws; provided, that no payment shall be made for the purchase of said property until an independent appraisal of the value of the property has been made by a qualified, disinterested appraiser; for the preparation of a master plan and necessary engineering for the development of the site; for the preparation of plans for medical science facilities, a teaching hospital and housing facilities; for the development of the site and for the construction of medical science facilities, including the cost of furnishings and equipment and necessary utility services; and, provided further, that except for the preparation of plans, expenditures for the construction of buildings shall be contingent upon the prior approval by the proper federal authorities and assurance by such authorities that the federal allocation will be not less than eighteen million seven hundred and sixty thousand dollars for the establishment of said medical school; to be in addition to the amount authorized in item 8070-10 of section two of chapter one hundred and thirty-eight of the acts of nineteen hundred and sixty-nine	9,200,000
8071-65	For the construction of a teaching hospital, including the cost of furnishings and equipment; provided, that expenditures from this item shall be contingent upon prior approval of the project by the proper federal authorities and assurance by such authorities that the federal allocation for the cost of the project will be not less than sixteen million five hundred forty-seven thousand dollars	53,230,000

Schedule A-20

State General Maintenance Appropriations

Summary of Expenditures by Functional Division and Subsidiary Account

Account Name and Number		Appropriation and Allotment	Administration	Instruction	Operation of Plant	Total Expenditure	Reverted to State Treasure	Balance of Appropriation June 30, 1971
General Maintenance								
7411-1005-01	Salaries, Permanent Positions	$1,130,751.18	$276,947.56	$425,053.76	$ 64,368.25	$ 766,369.57	-0-	$364,381.61
7411-1005-02	Salaries, Other	97,092.93	22,629.21	14,690.76	34,125.60	71,445.57	-0-	25,647.36
7411-1005-03	Service, Non-Employee	329,614.62	241,872.46	8,648.19	3,308.50	253,829.15	-0-	75,785.47
7411-1005-06	Housekeeping Supplies & Expenses	6,008.07	2,553.92	63.00	1,854.99	4,471.91	-0-	1,536.16
7411-1005-08	Heat and Other Plant Operations	26,748.53	3,371.75	-0-	9,030.01	12,401.76	-0-	14,346.77
7411-1005-09	Farm and Grounds	500.00	45.91	-0-	-0-	45.91	-0-	454.09
7411-1005-10	Travel and Automotive Expenses	22,132.34	10,982.84	833.14	13.32	11,829.30	-0-	10,303.04
7411-1005-11	Advertising and Printing	14,275.71	6,686.69	1,028.80	-0-	7,715.49	-0-	6,560.22
7411-1005-12	Repairs, Alterations, & Additions	40,822.95	2,924.94	1,068.25	22,684.64	26,677.83	-0-	14,145.12
7411-1005-13	Special Supplies & Expenses	179,867.16	83,494.80	40,894.10	953.61	125,342.51	-0-	54,524.65
7411-1005-14	Office & Administrative Expenses	40,619.26	25,788.64	310.50	-0-	26,099.14	-0-	14,520.12
7411-1005-15	Equipment	48,155.08	40,268.99	7,039.95	747.90	48,056.84	-0-	98.24
7411-1005-16	Rental	29,709.94	13,902.54	5,713.97	1,529.50	21,146.01	-0-	8,563.93
	Total	$1,966,297.77	$731,470.25	$505,344.42	$138,616.32	$1,375,430.99	-0-	$590,866.78

Schedule A-21

1971 Fiscal Year Expenditure Report

by Department in Budget Division

Dept. Code	Description	01-03 State Funds	04-08 State Funds	Other Funds*	Net Total
I 21	Administration	$ 342,855.39	$180,375.88	$ 299.22	$ 523,530.49
I 22	President's Office	145,294.37	116.67	-0-	145,411.04
I 31	Dean of Students	51,598.67	1,192.10	-0-	52,790.77
I 41	Library	61,187.34	14,826.10	-0-	76,013.44
I 51	Instruction	-0-	77.40	300.00	377.40
I 52	Anatomy	99,773.86	4,872.03	12,839.01	117,484.90
I 53	Biochemistry	81,329.18	8,523.52	25,895.78	115,748.48
I 54	Physiology	97,045.50	16,800.18	11,204.13	125,049.81
I 55	Community Medicine	44,112.91	1,789.23	-0-	45,902.14
I 56	Pathology	64,943.92	11,823.52	-0-	76,767.44
I 91	Operation of Plant	103,503.15	43,390.07	-0-	146,893.22
	Total	$1,091,644.29	$283,786.70	$50,538.14	$1,425,969.13

*Expenditures, other than salaries and wages, not distributed by all budget departments.

Schedule A-22

Capital Outlay Expenditures and Balances

Account Number and Name		Expires	Total Appropriation	Expenditures Prior Year	Expenditures Current Year	Reverted to State Treasurer	Balance of Appropriation June 30, 1971
7490-0035-00	Medical School Loan	1970	$ 600,000.00	$534,881.60	$ 57,926.10	$ -0-	$ 7,192.30
7490-0043-00	Library Books	1971	230,000.00	229,798.29	201.65	.06	-0-
7490-0055-00	Library Books	1972	200,000.00	138,168.12	22,836.47	-0-	38,995.41
7490-0067-00	Library Books	1973	230,000.00	21,562.11	114,001.43	-0-	94,436.46
			$1,260,000.00	$924,410.12	$194,965.65	$ .06	$140,624.17

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 05 SCHOLARSHIPS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
MEDICAL SCHOOL	W 020100	.00	5,912.61	.00	3,150.00	2,762.61	I21
SECT-05 SCHOLARSHIPS		.00	5,912.61	.00	3,150.00	2,762.61	

SECTION 08 GENERAL PURPOSE FUND

08/01 UNRESTRICTED CURRENT FUNDS							
ANATOMICAL TRUST FUND	W 024404	823.53	39.12	.00	735.00	127.65	I21
MEDICAL SCHOOL-PATHOLOGY	W 028200	.00	.00	.00	.00	.00	I56
EQUIPMENT MAINTENANCE FEE MEDICAL	W 032860	.00	560.00	.00	.00	560.00	I21
TRUST FUND INTEREST WORCESTER	W 040510	1,100.00	.00	1,900.00	1,000.00	2,000.00	I11
08/01 UNRESTRICTED CURRENT FUNDS	TOTALS	1,923.53	599.12	1,900.00	1,735.00	2,687.65	
08/02 DEPARTMENTAL SERVICE FUNDS							
BIOCHEMISTRY SERVICE FUND	W 025505	3,608.28	.00	.00	1,264.26	2,344.02	I53
MEDICAL SCHOOL SERVICE FUND	W 033200	5,689.40	1,987.16	.00	1,636.88	6,039.68	I11
08/02 DEPARTMENTAL SERVICE FUNDS	TOTALS	9,297.68	1,987.16	.00	2,901.14	8,383.70	
08/03 OPERATING ACCOUNTS							
RESEARCH TRUST FUND WORCESTER	W 035525	4,800.00	.00	22,412.81	4,358.05	22,854.76	I11
08/03 OPERATING ACCOUNTS	TOTALS	4,800.00	.00	22,412.81	4,358.05	22,854.76	
SECT-08 GENERAL PURPOSE FUND		16,021.21	2,586.28	24,312.81	8,994.19	33,926.11	

SECTION 10 LIBRARY FUNDS

U OF M MEDICAL SCHOOL LIBRARY FUND	W 040900	125.00	.00	.00	.00	125.00	I41
SECT-10 LIBRARY FUNDS		125.00	.00	.00	.00	125.00	

Schedule F-22 (Continued)

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SECTION 15 NONPROFIT ORGANIZATIONS & FOUNDATIONS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71	
MASS HEART ASSOCIATION	W 051106	.00	4,933.50	1,287.00CR	1,690.20	1,956.30	I54
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS		.00	4,933.50	1,287.00CR	1,690.20	1,956.30	

SECTION 20 FEDERAL GRANTS AND CONTRACTS-RESEARCH

20/01 NATIONAL INSTITUTE HEALTH							
AI-08791-01	W 081601	.00	50.00	7,681.34	7,731.34	.00	I21
NIH AI 08791-02	W 081602	.00	33.26	12,789.55	12,822.81	.00	I21
AM-13904-01	W 082611	.00	10.35	37,865.55	37,875.90	.00	I21
AM 13904-02-WORCESTER	W 082612	.00	.00	22,880.90	22,880.90	.00	I21
NIH AM-15046-01/WORCESTER	W 082904	.00	.00	21,137.16	21,137.16	.00	I21
GM 18332-01	W 082911	.00	.00	59.01	59.01	.00	I21
20/01 NATIONAL INSTITUTE HEALTH	TOTALS	.00	93.61	102,413.51	102,507.12	.00	
20/02 NATIONAL SCIENCE FOUNDATION							
GB 7547	W 088401	.00	.00	527.40	527.40	.00	I21
GB 24167/WORCESTER	W 091509	.00	.00	7,950.60	7,950.60	.00	I52
20/02 NATIONAL SCIENCE FOUNDATION	TOTALS	.00	.00	8,478.00	8,478.00	.00	
SECT-20 FEDERAL GRANTS AND CONTRACTS-RESEARCH		.00	93.61	110,891.51	110,985.12	.00	

SECTION 21 AGENCY FUNDS

HEALTH FEE WORCESTER	W 097220	.00	840.00	.00	560.00	280.00	I31
SECT-21 AGENCY FUNDS		.00	840.00	.00	560.00	280.00	

Schedule F-22 (Continued)

UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL AT WORCESTER
MONTHLY FINANCIAL REPORT OF TRUST AND AGENCY FUNDS

SUMMARY OF ALL SECTIONS

ACCOUNT NAME	ACCOUNT CODE	BALANCE AS OF JULY 1, 70	RECEIPTS TO DATE	TRANSFERS	EXPENDED TO DATE	BALANCE 06/71
SECT-05 SCHOLARSHIPS		.00	5,912.61	.00	3,150.00	2,762.61
SECT-08 GENERAL PURPOSE FUND		16,021.21	2,586.28	24,312.81	8,994.19	33,926.11
SECT-10 LIBRARY FUNDS		125.00	.00	.00	.00	125.00
SECT-15 NONPROFIT ORGANIZATIONS & FOUNDATIONS		.00	4,933.50	1,287.00CR	1,690.20	1,956.30
SECT-20 FEDERAL GRANTS AND CONTRACTS-RESEARCH		.00	93.61	110,891.51	110,985.12	.00
SECT-21 AGENCY FUNDS		.00	840.00	.00	560.00	280.00
TOTALS FOR TRUST FUNDS-- SECTIONS 03-05		.00	5,912.61	.00	3,150.00	2,762.61
TOTALS FOR TRUST FUNDS-- SECTIONS 06-20		16,146.21	7,613.39	133,917.32	121,669.51	36,007.41
TOTALS FOR TRUST FUNDS-- SECTIONS 03-20		16,146.21	13,526.00	133,917.32	124,819.51	38,770.02
GRAND TOTALS FOR TRUST AND AGENCY FUNDS		16,146.21	14,366.00	133,917.32	125,379.51	39,050.02

Schedule G-6

Inventory of Land

Location	Acreage	Assessed Valuation June 30, 1971
Worcester	127.7	$ 198,500.00
Total	127.7	$ 198,500.00

Schedule G-7

Inventory of Buildings and Structures

Bldg. No.	Constructed	Location	Description	Assessed Valuation June 30, 1971
370	1930	Worcester	Shelter - Bus Stop Station	$ 100.00
371	1961	Worcester	Greenhouse	6,500.00
372	1913	Worcester	House - Maple	7,000.00
373	1913	Worcester	Garage - Maple	400.00
376	1894	Worcester	Apartment - Farm House	35,000.00
411	1951	Worcester	Shaw Bldg. - Admin., Classroom, Labs.	230,000.00
444	1960	Worcester	Anderson House	7,800.00
			Total	$ 286,800.00

WESBY & SONS, INC.
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